


```

: ZIP: 20850
: COMPUTER READABLE FORM:
: MEDIUM TYPE: Diskette, 3.50 inch, 1.4MB storage
: COMPUTER: HP Vectra 486/33
: OPERATING SYSTEM: MSDOS version 6.2
: SOFTWARE: ASCII Text
: CURRENT APPLICATION DATA:
: APPLICATION NUMBER: US/08/961.083
: FILING DATE:
: CLASSIFICATION: 435
: PRIOR APPLICATION DATA:
: APPLICATION NUMBER:
: FILING DATE:
: ATTORNEY/AGENT INFORMATION:
: NAME: Brookes, A. Anders
: REGISTRATION NUMBER: 36,373
: REFERENCE/DOCKET NUMBER: PB340P2
: TELECOMMUNICATION INFORMATION:
: TELEPHONE: (301) 309-8504
: TELEFAX: (301) 309-8512
: INFORMATION FOR SEQ ID NO: 56:
: SEQUENCE CHARACTERISTICS:
: LENGTH: 796 amino acids
: TYPE: amino acid
: STRANDEDNESS: single
: TOPOLOGY: linear
: MOLECULE TYPE: protein
: US-08-961-083-56

Query Match 21.7%; Score 949; DB 4; Length 796;
Best Local Similarity 29.5%; Pred. No. 5,1e-69;
Matches 277; Conservative 100; Mismatches 214; Indels 348; Gaps 34,

22 STVLGKHHMGSAITKQNOJAYIDSKGKAKAPRT-KTMDQIAEGBISABQIVYKTIIDG 80
: |||: : : : ||| || ||| |||: ||| ||| |||: ||| ||| |||
1 SYELGLYQARTVKEENNRVSYID--GKQMTQNTENTLTDEVSKREGINAEDVIYKTIIDG 57
: ||||| ||||| ||||| ||||| ||||| ||||| ||||| ||||| ||||| |||||
81 YVTSHGCHVHYHYNKNKYVYDAIISEELMTDPNYPFKQSDVINELIDGVYIKVNGNYYVL 140
: ||||| ||||| ||||| ||||| ||||| ||||| ||||| ||||| ||||| |||||
56 YVTSHGDIHYHYNKNKYVYDAIISEELMTDPNYPKLTDEDIYNEVGKGVYIKVNGKYYVVL 117
: ||||| ||||| ||||| ||||| ||||| ||||| ||||| ||||| ||||| |||||
141 KFGSKRNKNTIKQOIAEYVAKGTGKFEAKERKGLQVNAHLSKEEVAVNMKACOGGYTTDDGY 200
: |||: ||||| |||: : : : ||| ||| ||| ||| ||| ||| ||| ||| ||| |||
118 KDAHADNVNRTKEEINNGKQEHSGH-REGS-----TPRNDGVALNARSQGRYTTDDGY 169
: ||||| ||||| ||||| ||||| ||||| ||||| ||||| ||||| ||||| |||||
201 IFSPTDIIIDLGDAIYLVPHGNIHYHYPKKDQSPSELAQAQYMSQKGRS--ARPSDYRP 258
: ||||| ||||| ||||| ||||| ||||| ||||| ||||| ||||| ||||| |||||
170 IFNSADIIETEGDAIYVPHGDHYHYPKNEIJSASELAEAFLS--GRGNLSNSTYRR 226
: ||||| ||||| ||||| ||||| ||||| ||||| ||||| ||||| ||||| |||||
259 TPAPAPRRKAPRPDPTVPNGOGHODPDNGGYHAPRPNNDASQNKHRDFFKGTFFKEL 318
: |||: ||||| |||: ||||| |||: ||||| |||: ||||| |||: ||||| |||: |||||
227 QNSNTSRTMW-VPVS-NPGTTNTNTS-----NSNTNSQASQSDND-----IDSL 271
: ||||| ||||| ||||| ||||| ||||| ||||| ||||| ||||| ||||| |||||
319 DQHRDLKTRHVEEDGLFEPTQYIKSNMAGYVYPHGDIHYHIIIPRSQSLPEMETAD-- 376
: ||||| ||||| ||||| ||||| ||||| ||||| ||||| ||||| ||||| |||||
272 KQYKLPISORHVESDGLVFDAQITSTRAGVAVPHGDHYHIFIPYSQMSLEERIAKI 331
: ||||| ||||| ||||| ||||| ||||| ||||| ||||| ||||| ||||| |||||
377 --RYLAGQTEDD-----DSGSD----- 391
: |||: ||||| |||: ||||| |||: ||||| |||: ||||| |||: ||||| |||: |||||
332 PLKTRSHMVPDSRPQSPQPTPEPSPSGQPAPADNLKIDNSSLSVQLRVKYGEGYFEE 391
: ||||| ||||| ||||| ||||| ||||| ||||| ||||| ||||| ||||| |||||
392 -----HSKPSDEK-VHPTFLGR-----IKYV----- 412
: ||||| ||||| ||||| ||||| ||||| ||||| ||||| ||||| ||||| |||||
392 KGISRYVFAKDLPSFTVKNLPSKLSKQSSVSHIITLAKKEVNAVRDGEFDKYNLLTEAH 451
: ||||| ||||| ||||| ||||| ||||| ||||| ||||| ||||| ||||| |||||
413 -----GKGLD-----GKP----- 420
: |||: ||||| |||: ||||| |||: ||||| |||: ||||| |||: ||||| |||: |||||
452 KALFNNKGRNSDFOALDKLLERLNDESTNKEKIVLDILAFLAPITHTPRLKGPNSQIEYT 511
: ||||| ||||| ||||| ||||| ||||| ||||| ||||| ||||| ||||| |||||
421 -----YDSDAVYFSKESISVYKSGVTAKHGDIHFHYIGFGLDEYELDEVAN 468
: ||||| ||||| ||||| ||||| ||||| ||||| ||||| ||||| ||||| |||||
512 EDEYRTAQADKTYTSDGYTFDEHDITISDGDVAVTPRHMGSHWGKQSLSDKEKEVAQA 571

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LENGTH: 1861 amino acids
 TYPE: amino acid
 STRANDEDNESS:
 TOPOLOGY: linear
 MOLECULE TYPE: protein
 US-08-790-912-4

Query Match 3.3%; Score 143.5; DB 2; Length 1861;
 Best Local Similarity 18.3%; Pred. No. 0.011;
 Matches 190; Conservative 166; Mismatches 328; Indels 353; Gaps 56;

QY 36 DNOAIYIDDSKAKAKAPK-----TNKTM-D-QISAEF-GISEAQIVYITDGGVYSHGDH 89
 DB 199 DNR---IPDNOQANNDKALNOKKIDYSVFDKGLKQYGVNTIE----- 244
 QY 90 HFYKGVYPAIISEELLMTDPNRYFKOSDYINEILDGYIKVN-----GNYVYL--KP 142
 DB 245 -----PODEVLSGR--VAKPELLYKETSIEIETIAVGEIDIQNPDLAEGTVAVKQEGKP 295
 QY 143 GSKRRNIR-----TKQOIAEOYAKGTKEAKEKGL-----AOYA 175
 DB 296 GRKIEVVRIFTVDNAEVSREVLSKIEEATPKIVEKTKKLEAPSEKPYTSLNVOPEOYA 355
 QY 176 HLSK-----EEVAANVEAKKQGRYT--TDGYSFPTDITDIDLG---DAYLYP 218
 DB 356 PLPEYTVGSGAIVEPEQVASLPE-----YSGTLSGAIVEPEQIEPEIGVSGAIVEP 409
 QY 219 HGNHYHIIPKRD-----LSPSELAAQAYWSOKQGRGAPSDYRPTP-----A 261
 DB 410 E---QVTPLPEYVTGQGAIVSPEQVAPLPEYVTGQSGAIVEPAQVPLPEYTVGQSGA 465
 QY 262 PAPRRKAPLPD-----VTPNP-----GQ 280
 DB 466 IVKPAQVPLPEYVTGQSGAIVEPEQVTPSPSEYTVGQGAIVEPEQVASLPEYTVGQSGA 525
 QY 281 GHOPD-----NGGYHAPRPPRND---ASQNKHORDE-FKQKTFEKELD-QLHRL-D 325
 DB 526 IVEPEVPEPOEYTGNIETPAPELENTEKAQOEKQEPKKNIELRANSVDVELSLAD 585
 QY 326 LKYR-HVEEDGL-----IFEP-TOVIKSNAFGYVVPBGDHHIIPRS 365
 DB 586 GKYOQHSALAIPEQNOENFEYKVKSKFKDVFLEISSIVSTKDGQPV-----YKITASA 640
 QY 366 QLSPELELDRLYAGTQEDDDSGSDSKSPDKDVTH-TLGHRIKAYGGLDGKPDTS 424
 DB 641 E--KLKODVNNKY-----EDNFTFYLAKKAREVNTFTSFNSLVQAIINNNGKTYTLAA 692
 QY 425 DAVYFSKESHSVDKSGVTAKHGDHFHYIGFGELOYELDEVANWYAK-----GOADE 478
 DB 693 -----SLNANEVELENG-----ASSYIKGRFTGKLFSGSKDG 723
 QY 479 LAALADDEQGEKPLFTTKVYS-----RKVYTKDGK--VGYAMPKQKGYFPAKROLDL 529
 DB 724 KNVAI---YNNKPKPLFDLSAAVENVLTLDVNVNIGKTDIGAL-----ANEANNA 770
 QY 530 TQIAFAQELMLAKKK-----HYRYDIYD-----TG 555
 DB 771 TRINNHYVDGLAGERGIGGLYMKADSKISNSFSKGRIVNSYETKAPYINIGGLVGLTG 830
 QY 556 I-----EPRLAVDVSLPMHAGNATYDTG-----SSFVTPHIDHILH----- 591
 DB 831 INALVDKSKATITISS---NADSTNGTVGGLAGLVEKDALISNSYAGCNINNVKRFSGVA 887
 QY 592 -VVPYSULTRDQIATIKYVMQHPREVPDINSKPGHESGSVTPVNTPLDKRAGKPN--MQ 648
 DB 888 GVAGYILM-DRDS--SEERIRAGRLHNVLSLDINMNGNAISGYHYRGMRLTDSYSNKNDRHYK 945
 QY 649 I-IHSAEYVOKALAGRAPATPDGYIFPDROVLAKETFYVMKDGSSIPRADGSSLRITNKS 707
 DB 946 VTLEKDEVYTKESIEER-----GTLLDVSOQIAKSKSEI---NSLSAKRVELLTLSTKES 997
 QY 708 DLISQAEMQAOELLAKKNA-----GDATDTDK---PREKOADKSNENQ 749

DB 998 DESKVKDYOASRALAKYKNIKLELPFYNKATIVKGNLYKEDSTLYEKELISAVMMKDNV 1057
 QY 750 PSEASKEEKESDDEIDSLPBYGLDR--ATLEDHINOQAQANIDPKYLLFPQPCGYFPYN 807
 DB 1058 ITDIASHKE-AANKLLIHYKHSSEKIDLTVOQSDFSKLAIE-YRVDGTGLIYTPN--QFLQ 1113
 QY 808 KNGELVTYDIKTLOOIN 824
 DB 1114 NNSSTIVNEVLPDLKAVD 1130

RESULT 5
 PCT-US93-07261-11
 Sequence 11, Application PC/TUS9307261
 GENERAL INFORMATION:
 TITLE OF INVENTION: FLEMPP MALARIA ANTIGEN, ANALOGS, ANTIBODIES AND USES THEREO
 NUMBER OF SEQUENCES: 23
 CORRESPONDENCE ADDRESS:
 ADDRESSEE: John H. C. Blasdale
 STREET: One Giralda Farms
 CITY: Madison
 STATE: New Jersey
 COUNTRY: USA
 ZIP: 07940-1000
 COMPUTER READABLE FORM:
 MEDIUM TYPE: Floppy disk
 COMPUTER: Apple Macintosh
 OPERATING SYSTEM: Macintosh 6.0.5
 SOFTWARE: Microsoft Word 5.1a
 CURRENT APPLICATION DATA:
 APPLICATION NUMBER: PCT/US93/07261
 FILING DATE: 19930805
 PRIOR APPLICATION DATA:
 APPLICATION NUMBER: US 07/927,531
 FILING DATE: 07-AUG-1992
 ATTORNEY/AGENT INFORMATION:
 NAME: Blasdale, John H. C.
 REGISTRATION NUMBER: 31,895
 REFERENCE/DOCKET NUMBER: DX0288K
 TELECOMMUNICATION INFORMATION:
 TELEPHONE: 201-822-7398
 TELEFAX: 201-822-7039
 INFORMATION FOR SEQ ID NO: 11:
 SEQUENCE CHARACTERISTICS:
 LENGTH: 1588 amino acids
 TYPE: amino acid
 TOPOLOGY: linear
 MOLECULE TYPE: protein
 PCT-US93-07261-11

Query Match 3.3%; Score 142.5; DB 5; Length 1588;
 Best Local Similarity 20.0%; Pred. No. 0.01; Indels 233; Gaps 38;
 Matches 174; Conservative 120; Mismatches 341;
 QY 27 KHHGSATDNOIAYIDSKGAKAPKTN-----KTMQISAEISAEQIVYKITYDGY 81
 DB 4 KKKLKKTEKKNKARNALEKELKLEKQKNDKADLTKKESQSSSEKSLKEKYNGBAL 63
 QY 82 VYSHGDHYHFYKGVYDAIISEELLMTDPNRYFKOSDYINEILDG--YIVKVNQ--- 135
 DB 64 KEKE-----NKETLKKKELENOKEKEKKNKIKDNDEALKNKNDKDD 106
 QY 136 -YVYVILKPGSKRRNIR-----TKQOIAEOYAKGTKEAKEK-----GLAOYA 175
 DB 107 KTIAPKPSPEVEKDLKEMELKEKEPIKQHLKDYEEKKEKRRNWIIRSLRDKLEIQLE 166
 QY 176 HLSKEEVAANVEAK-----ROGRYTTDGYITFSPD-----IIDDL 211
 DB 167 KINAQLESAINELKEKERRASRRPMYKMGKMDDEVEMIKKYDDQAEKNGTKDEIKDK 226
 QY 212 GDAY--LVP---HGNHYHIIPKDLSPSELAAQAYWSOKQGRGAPSDYRPTPAPAGR 266

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Db 227 GDGEYEIVETKFGYGMRENALGELD-EYEEYERKRYLKEDEG-----DLK----- 272
QY 267 RKARIPDVTPNPGCHQPDNGCYHAPRRPNDSQNHQDDEFKGTFFKLLDQLHRLD 326
Db 273 ---DVEEKELEFTGYGFKPEPTTRILVKKRRNKEQKLEKDEKELIAAEPPDEKKIKL 329
QY 327 KYRNVEDGLIEFTQYIKSN-AFGYVVPBGDHYHIIPSQSLP-----EMELADRYLAG 381
Db 330 K-----DSDDKVYVNVNKNKSSFPDKFRAPDKKRTMFRLSLPPYVRKNNELA---VCG 382
QY 382 QTEDDSGSHKSPDKSEVTHTF-----LGHRIKAYGKGL----- 416
Db 383 DSMD-----SKVNGKKLKSTFNPRRRNKLKERKQELHKKKKYKKYKLLEREKR 435
QY 417 ---DGKPYDTSDAVYFVKESHSYDCKGYAKHGDHFIYIGFGLGEYELDEVANWVK-- 471
Db 436 ENPDGEPLMTPEIHVIRPDL--MDK--GENKSAGHPKYPOTPKGLKEYESHVSXDYOLE 492
QY 472 -----AKQADELAALDQEOGKEKPLFDTKKVSRYKVTGDKGVGYMMPKDGKDYF 521
Db 493 HEPPTKLPYEKGHVS-R-EYQDHEPPTKLPYEKGHVSREYQDNEVDRELPEYEKGHV 551
QY 522 YARQOLD---LQIARAEQELML-KDKKHRYDIYDTGIEPRLA--VDYSSLPMHAGNA 574
Db 552 SREYQDNEGPSTLKEYDQETELAKGKDITNKPHESVDEYDQETELAKGKDITNKP-HESVD 610
QY 575 TYDGTSSFYIPIHDIHVVPYSWLTQDIATIKYVMOHPEVRPD-----TMSK 622
Db 611 EYD-----QSELAKGKDITNKPHESVDEYDQETELAKGKEVYTNK 648
QY 623 PGHESSGVIPNVTPLDKRAGMPNMOIHSAEVOKALAEGRAT-----PDGYTFDR 676
Db 649 P-HENLEEY--NETDLAKKEVYTNKPHESVDEYDQSELAKGKDITNKPHESVDEY---DQ 702
QY 677 DYLAKEFTVWKDGSFSIPRADGSSLRTINKSDLSQAEMQAOELL--AKKNAGDATDTDK 734
Db 703 TELAK-----GKEVYTNKARENLEEYNETDLA-----GKEVYTNKARENLEEYNETDL 749
QY 735 PKEKQADKSNENQOPEASKEEESD 762
Db 750 AKGKEVYTNKAHEN-----LEEYNETD 770

RESULT 6
PCT-US93-07261-16
: Sequence 16, Application PC/TUS9307261
: GENERAL INFORMATION:
: TITLE OF INVENTION: PFEMP3 MALARIA ANTIGEN, ANALOGS, ANTIBODIES AND USES THEREOF
: NUMBER OF SEQUENCES: 23
: CORRESPONDENCE ADDRESS:
: ADDRESSEE: John H. C. Blasdale
: STREET: One Giralda Farms
: City: Madison
: STATE: New Jersey
: COUNTRY: USA
: ZIP: 07940-1000
: COMPUTER READABLE FORM:
: MEDIUM TYPE: Floppy disk
: COMPUTER: Apple Macintosh
: OPERATING SYSTEM: Macintosh 6.0.5
: SOFTWARE: Microsoft Word 5.1a
: CURRENT APPLICATION DATA:
: APPLICATION NUMBER: PCT/US93/07261
: FILING DATE: 19930805
: PRIOR APPLICATION DATA:
: APPLICATION NUMBER: US 07/927,531
: FILING DATE: 07-AUG-1992
: ATTORNEY/AGENT INFORMATION:
: NAME: Blasdale, John H. C.
: REGISTRATION NUMBER: 31,895
: REFERENCE/DOCKET NUMBER: DX0288K
: TELECOMMUNICATION INFORMATION:

```

```

: TELEPHONE: 201-822-7398
: TELEFAX: 201-822-7039
: INFORMATION FOR SEQ ID NO: 16:
: SEQUENCE CHARACTERISTICS:
: LENGTH: 1663 amino acids
: TYPE: amino acid
: TOPOLOGY: linear
: MOLECULE TYPE: peptide
: ORIGINAL SOURCE:
: ORGANISM: Plasmodium falciparum
: STRAIN: Malayan Camp
: PCT-US93-07261-16

Query Match 3.3% Score 142.5; DB 5; Length 1663;
Best Local Similarity 20.0%; Pred. No. 0.011;
Matches 174; Conservative 120; Mismatches 341; Indels 233; Gaps 36;

QY 27 KHHMSATKDNQIAYIDSKGAKAPKTN-----KTMDISAEGISABQIVYKITDGY 81
Db 4 KEALQKTEKNEKARNALKEKKLEQKKNDQAKADLTGKESQSSSEKSLKEKYNGEAL 63
QY 82 VISHGHHYFNKGVYDYDAIISELLMTDPNTRFKOSDYINELDG--YVIVNGN----- 135
Db 64 KEKE-----NKETLKKLENOKEKEKEKRIKUNDEALKNKNDKDD 106
QY 136 -YVYVLKPSKRRNIR-----TKQOLAQYVAKGTKEAKEK-----GLAQYA 175
Db 107 KTIYPRKPSVEKDLKEMLEKEKFIKQHLKDYERKEKRRRWILSLRDLKREIEOLE 166
QY 176 HUSKEEVAANNEAK-----RGRYTTDDGYTFSPD-----IDDL 211
Db 167 KLNQALESAINELKERRASRRPMYVMQGMKDEVDWKYKDDQAEKNGTDEIKDK 226
QY 212 GDAY--LVP-----HGNHYHIIPKKDLSPSLAAQAQWQSGQKRGARPSYRRTTPAPAGR 266
Db 227 GDGEYEIVETKFGYGMRENALGELD-EYEEYERKRYLKEDEG-----DLK----- 272
QY 267 RKARIPDVTPNPGCHQPDNGCYHAPRRPNDSQNHQDDEFKGTFFKLLDQLHRLD 326
Db 273 ---DVEEKELEFTGYGFKPEPTTRILVKKRRNKEQKLEKDEKELIAAEPPDEKKIKL 329
QY 327 KYRNVEDGLIEFTQYIKSN-AFGYVVPBGDHYHIIPSQSLP-----EMELADRYLAG 381
Db 330 K-----DSDDKVYVNVNKNKSSFPDKFRAPDKKRTMFRLSLPPYVRKNNELA---VCG 382
QY 382 QTEDDSGSHKSPDKSEVTHTF-----LGHRIKAYGKGL----- 416
Db 383 DSMD-----SKVNGKKLKSTFNPRRRNKLKERKQELHKKKKYKKYKLLEREKR 435
QY 417 ---DGKPYDTSDAVYFVKESHSYDCKGYAKHGDHFIYIGFGLGEYELDEVANWVK-- 471
Db 436 ENPDGEPLMTPEIHVIRPDL--MDK--GENKSAGHPKYPOTPKGLKEYESHVSXDYOLE 492
QY 472 -----AKQADELAALDQEOGKEKPLFDTKKVSRYKVTGDKGVGYMMPKDGKDYF 521
Db 493 HEPPTKLPYEKGHVS-R-EYQDHEPPTKLPYEKGHVSREYQDNEVDRELPEYEKGHV 551
QY 522 YARQOLD---LQIARAEQELML-KDKKHRYDIYDTGIEPRLA--VDYSSLPMHAGNA 574
Db 552 SREYQDNEGPSTLKEYDQETELAKGKDITNKPHESVDEYDQETELAKGKDITNKP-HESVD 610
QY 575 TYDGTSSFYIPIHDIHVVPYSWLTQDIATIKYVMOHPEVRPD-----TMSK 622
Db 611 EYD-----QSELAKGKDITNKPHESVDEYDQETELAKGKEVYTNK 648
QY 623 PGHESSGVIPNVTPLDKRAGMPNMOIHSAEVOKALAEGRAT-----PDGYTFDR 676
Db 649 P-HENLEEY--NETDLAKKEVYTNKPHESVDEYDQSELAKGKDITNKPHESVDEY---DQ 702
QY 677 DYLAKEFTVWKDGSFSIPRADGSSLRTINKSDLSQAEMQAOELL--AKKNAGDATDTDK 734
Db 703 TELAK-----GKEVYTNKARENLEEYNETDLA-----GKEVYTNKARENLEEYNETDL 749

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APPLICATION NUMBER: US/09/100,804
FILING DATE:
CLASSIFICATION:
PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 08/596,291
FILING DATE: 09-AUG-1996
APPLICATION NUMBER: US 08/115,573
FILING DATE: 01-SEP-1993
PRIOR APPLICATION DATA:
APPLICATION NUMBER: PCT/US94/09943
FILING DATE: 01-SEP-1994
ATTORNEY/AGENT INFORMATION:
NAME: GATES, EDWARD R.
REGISTRATION NUMBER: 31,616
REFERENCE/DOCKET NUMBER: LQ461/7003
TELECOMMUNICATION INFORMATION:
TELEPHONE: 617-720-3500
TELEFAX: 617-720-2441
TELEX:
INFORMATION FOR SEQ ID NO: 3:
SEQUENCE CHARACTERISTICS:
LENGTH: 2465 amino acids
TYPE: amino acid
TOPOLOGY: linear
MOLECULE TYPE: protein
US-09-100-804-3

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Query Match          3.0%; Score 133; DB 3; Length 2465;
Best Local Similarity 19.9%; Pred. No. 0.12;
Matches 176; Conservative 114; Mismatches 322; Indels 272; Gaps 44;

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QY 9 GSAAILLATHIGSYQLOKHHM---GSATKNOIAYIDDSKGAAPARTNKMD-QIAAE 64
DB 1422 GQVHLLLEK--GQSPTEKHEHVPTRPQCTLSQNA---QGQSPREVKKTTQYKDYSEVTE 1476
QY 65 EGISABQIVKTTDOGYVTHSGDHYHNGKVPDAIISSEILMTDPYRKQSDVINEI 124
DB 1477 ENTPEVKLEKSSGGLGFSFRED--NLPEQINASIVHKKLFGAQPAAESGKIDVGVVI 1534
QY 125 LDGYVIRKNGNYVYLKSGSKRNRT-----KQ 154
DB 1535 L-----KNG---ASLKGISQOEVSALRGAPVEVLLCRPPGVPLEIDTALLTPLOS 1586
QY 155 IAEQAKSTKEAKKGLAQAVALHLSKEVAANAENAK-----RQGRYTP-----DDGYIFS 203
DB 1587 PAQVLPNSSKSSQSPSCVEQSTSDENEMSDSKSKQCKSPSRSDSYSSSGSGEDDLVTA 1646
QY 204 PTDIIDDLGDAVL-----VPHGNHYITRKDLSPSELAAQAQVWSQKQGRGAPSDY 256
DB 1647 PANISNSWSSALHQTLSNMVSOAOSHHEAPK---SQEDTICTMFTFYPOKIPNRPFEEDS 1703
QY 257 RPTAPABGRKRAPIDVTPNPGOGHOPDNGCYHAPRPRPDASONKQORDEFGKTEKE 316
DB 1704 NPSPLP-----PDMA--PGQSYORQS-----ESASSSMKXHHNHISEPTROE 1745
QY 317 LLDLQHLRLDKYRHYVEDGLIFE--PTQYIKSN--AFGVVPHGDHYHIIIPRSQSLPEME 373
DB 1746 NWTPL-KNDLE-NHLEDFELEVEELITLIKSEKASLGFYVKN-----Q 1788
QY 374 LADRYLAGQTEDDSGSHSKPSDK-----EVTHTFLGRIRKAYCGK-----LDGK 419
DB 1789 RIGCYVHYVIODDPAKSDGRRLKPGDRLIKVNDVTNMTHTDAVALLRAASTVRLVIGRV 1848
QY 420 PYDTSDAVVFESKESTHSYDKSVTAKEGHDHNYIGFGELEQYELDEVAANWYKAKGQADEL 479
DB 1849 PRITQNTNVASFATGH-----KILCNKEEL 1873
QY 480 AAALDQEGKREKPLEDTKKVSKYTKQCKGVAMPKQCKDYFTYARDDLDLTQIAFAQEL 539
DB 1874 GFSL---CGHDSLYOVVYIS-----DINPRSVAAIGNL 1905
QY 540 MLKDKKHRYDIDVTGI---EPRLADVSSLPMHAGNATYDTGSSFYIPIHDHIVVPS 596

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DB 1906 QLLDVIHYVNGSVTQGMLEEVNRLDM-SLPSLYLAKTR-----NDLPVPS 1953
QY 597 WLTRDQIATIKRYVQHPEVRPDIWSKPGHEEGSVI--PNVPLDKRAGMPNWOIHSAAE 655
DB 1954 --KRSVSA-----PKSTKNGNSYVSGSCSPALTPNDSESTV-----AGEE 1993
QY 656 VOK-ALABGRATPDGYIF--DPRDVLAKETFWKDKSFSIPRADGSSLRTINKSLDLSQA 712
DB 1994 INEISYPRGKCSST---YOIKGSPMLTLPKESYIOEDDIY-----DSQEAFAVIOQLDLY 2045
QY 713 EMOQAOELLAKKN-AGDA-----TDDN--KREKQOAKSN-----745
DB 2046 D-EPQONILNENNAAGDSGCGTAKMNGKISEERTEDTDGSPLEPYFTYATKMGCEE 2104
QY 746 --ENQOPEA--SKEEKESD-----FIDSLPDYGLDRATLED 780
DB 2105 YCEEKVKSSELIOKPOEKRTDDEITWGNDELPR---IERTNHD 2145

```

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RESULT 9
US-08-296-791-3
Sequence 3, Application US/08296791
Patent No. 6245337
GENERAL INFORMATION:
APPLICANT: St. Geme III, Joseph W.
TITLE OF INVENTION: Haemophilus Adherence and Penetration
TITLE OF INVENTION: Protein
NUMBER OF SEQUENCES: 9
CORRESPONDENCE ADDRESS:
ADDRESSEE: Flehr, Hohbach, Test, Albritton & Herbert
STREET: 4 Embarcadero Center, Suite 3400
CITY: San Francisco
STATE: California
COUNTRY: United States
ZIP: 94111-4187
COMPUTER READABLE FORM:
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patent In Release #1.0, Version #1.25
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/296,791
FILING DATE: 25-AUG-1994
CLASSIFICATION: 435
ATTORNEY/AGENT INFORMATION:
NAME: Treacartin, Richard F.
REGISTRATION NUMBER: 31,801
REFERENCE/DOCKET NUMBER: A-59941/REF/RMS
TELECOMMUNICATION INFORMATION:
TELEPHONE: (415) 781-1989
TELEFAX: (415) 398-3249
TELEX: 910 277299
INFORMATION FOR SEQ ID NO: 3:
SEQUENCE CHARACTERISTICS:
LENGTH: 1541 amino acids
TYPE: amino acid
TOPOLOGY: unknown
US-08-296-791-3

```

```

Query Match          3.0%; Score 131.5; DB 4; Length 1541;
Best Local Similarity 17.5%; Pred. No. 0.078;
Matches 153; Conservative 111; Mismatches 294; Indels 315; Gaps 37;
QY 44 DSKGRKAKA-----PKTNKTMQISAEGLISAEQIVKTTDOGYVYHSHGDHYHYNGK 95
DB 462 DNGSLKVDGTYILKQNTNGSGOHAFASGVIGRSTVLVNDKQVDPNSIYFGFRGR 521
QY 96 -----VPPDAI-----TSEELMTDPN-----YRKQSDVIN- 122
DB 522 LDLNGSLTFDHRINDGCARLVNNMTNASTITTTGESLITDPMTTTPYINIDAPDENP 581

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Db 1004 QADVPSP-----SNNEIARVDEAPVPPAPAT-----PSETTEV 1040
Qy 621 SKPHRESSGSIPIVPTPLDRACBPNNQIHSAEVOKALABGRFATPDYIIPDPVLA 680
Db 1041 AENSKOSKSTVEKNEQDATETTAO-NREVAKEAKSNVKNATQNEVAOSG--SETETOT 1097
Qy 681 KETVWMDGSPFSLPRADGSSILRTINKSDLSQAEWQAOELAKKNAGDADTDKPREKQ- 739
Db 1098 TET-----KETATVEKEKAKVETEKTOEY-----PKYTSQVSPKQOS 1136
Qy 740 -----QADKSNENQOPEASKEEKESDDPTDS 767
Db 1137 ETYQOQAEAPAREN-DPTVNIKEPOSQTTTADT 1168
RESULT 11
US-08-867-941-19
; Sequence 19, Application US/08867941
; Patent No. 5977337
; GENERAL INFORMATION:
; APPLICANT: Loosmore, Sheena M
; APPLICANT: Du, Run-Pan
; APPLICANT: Wang, Qui-Jun
; APPLICANT: Yang, Yan-Ping
; APPLICANT: Klein, Michel H
; TITLE OF INVENTION: LACTOFERRIN RECEPTOR GENES OF MORAXELLA
; NUMBER OF SEQUENCES: 67
; CORRESPONDENCE ADDRESS:
; ADDRESSEE: Sim & McBurney
; STREET: 6th Floor, 330 University Avenue
; CITY: Toronto
; STATE: Ontario
; COUNTRY: Canada
; ZIP: M5G 1R7
; COMPUTER READABLE FORM:
; MEDIUM TYPE: Floppy disk
; COMPUTER: IBM PC compatible
; OPERATING SYSTEM: PC-DOS/MS-DOS
; SOFTWARE: PatentIn Release #1.0, Version #1.30
; CURRENT APPLICATION DATA:
; APPLICATION NUMBER: US/08/867, 941
; FILING DATE: 03-JUN-1997
; CLASSIFICATION: 435
; ATTORNEY/AGENT INFORMATION:
; NAME: Stewart, Michael I
; REGISTRATION NUMBER: 24,973
; TELECOMMUNICATION INFORMATION:
; TELEPHONE: (416) 595-1155
; TELEFAX: (416) 595-1163
; INFORMATION FOR SEQ ID NO: 19:
; SEQUENCE CHARACTERISTICS:
; LENGTH: 1076 amino acids
; TYPE: amino acid
; STRANDEDNESS: single
; TOPOLOGY: linear
US-08-867-941-19
Query Match 2.98; Score 128.5; DB 2; Length 1076;
Best Local Similarity 20.18; Pred. No. 0.08;
Matches 141; Conservative 87; Mismatches 244; Indels 231; Gaps 40;
Qy 3 KTYGIGSVAILATHIGSYOLK---HMGSATKDNQIAYI---DD--SKGK---- 48
Db 148 KNVAAGGAINIEY-ENRVSVEISKGANSSEYSGALSGVAFTKTRADIIKDKGMGV 206
Qy 49 ----AKAPKTKTKTDQISAEIGISAEOIYVKITD---QGYTSHGDHYHFYNGKVPYDAI 101
Db 207 QTKTAYAKSKNNAMNSVAAGKASFSGLIYTRRGEY-KAHDD---AYGSGSDRA 262
Qy 102 ISEILLMTDPNPKQSDVINELIDGVIKVGNGVYYLKPQ-----SKRKNITKQOIA 156

Db 263 VA-----TTDPNNR--TFLIANEC-----ANGNEYACAGQOTKIQAKPNNVRDKVNVK 309
Qy 157 EQVANG-----TKEAKKKGLAQVAHLS-KEEVAANVEAKRQGYTTDDGYIESPTII 208
Db 310 DYTGNRLIIPNPLTDSKSLTRPGYOLNDKHYVGVYEITKQ-NYAMODKTV----- 361
Qy 209 DDLGDAYLVPHGNHYIIPKKDLSPEL---AAQAYMSOKGRCARPSDYRPPAPARG 265
Db 362 ---PAYLAVH-----DIEKSRLSNHAQANGYI-QGNNLGERLRD----- 396
Qy 266 RRRAPIDVTPNGQGHQDPNGCYHPAPRPNDASONKHQDEF-----KGKTFK 315
Db 397 -----TIGPSGYGINAHGVFY-----DEKHQKRLGLEYYVDSKGENKWF 439
Qy 316 ELLDQHLRLD-----KYRHYEDGL--IPEPTQYIKSNAGYVVPH----- 355
Db 440 DVKVSYDKODITLRSQLTNTHCSYTPHIDNCTPDVKNPFSEYEDVNNAYKROHMLIAV 499
Qy 356 -----GDHYHILPR-----SOLSPLEMLADRYLAGQTEDDSGSDHSKPSDEY 400
Db 500 ENKMAIGSTHHHINIQVGYDKFNSSLRVEYRLA-----THSQYKLDYTPPSNP-- 550
Qy 401 THTFLGRIKAYGKGLDKPYDTSAYVFSKESHSVDSKGYTARHGDHFIYIGFGELEQ 460
Db 551 ---LPEKFKPI-LGSNNKPI-CLDAYGYGHD-----HPQACNANSTYONFAIKKIGIEQ 599
Qy 461 YELDEVANNVKKGQADEL--AAALDQ--EGKKEKPLPTKYSR-----KYTKGKGY 511
Db 600 Y-----NOKTNTDKIDYQALIDQYKQNPNSTLKFPEKIKOSLOEKYNKIDELGF 650
Qy 512 MMRKD-----GKDYFARDQLDLQIAFAEOLMLKDKKHRYDIY 552
Db 651 KAKDLBNEMAGWTNDSQNNANKGTDNLY-----PNQATYVKDKD-CKYS-- 696
Qy 553 DTGIEPRLAVDVSLPMHAGNATYDTGSSFYIPIHDHIVPY 595
Db 697 ---ETNSYADCSITPRHT-----SGDNYFIALKDNMTINKY 729
RESULT 12
US-09-074-658-19
; Sequence 19, Application US/09074658
; Patent No. 6184371
; GENERAL INFORMATION:
; APPLICANT: Loosmore, Sheena M
; APPLICANT: Run-Pan Du
; APPLICANT: Qui-Jun Wang
; APPLICANT: Yang, Yan-Ping
; APPLICANT: Klein, Michel H
; TITLE OF INVENTION: LACTOFERRIN RECEPTOR GENES OF MORAXELLA
; NUMBER OF SEQUENCES: 78
; CORRESPONDENCE ADDRESS:
; ADDRESSEE: Sim & McBurney
; STREET: 6th Floor, 330 University Avenue
; CITY: Toronto
; STATE: Ontario
; COUNTRY: Canada
; ZIP: M5G 1R7
; COMPUTER READABLE FORM:
; MEDIUM TYPE: Floppy disk
; COMPUTER: IBM PC compatible
; OPERATING SYSTEM: PC-DOS/MS-DOS
; SOFTWARE: PatentIn Release #1.0, Version #1.30
; CURRENT APPLICATION DATA:
; APPLICATION NUMBER: US/09/074,658
; FILING DATE: 08-MAY-1998
; CLASSIFICATION: 435
; ATTORNEY/AGENT INFORMATION:
; NAME: Stewart, Michael I
; REGISTRATION NUMBER: 24,973
; TELECOMMUNICATION INFORMATION:
; REFERENCE/DOCKET NUMBER: 1038-795

```

: TELEPHONE: (416) 595-1155
: TELEFAX: (416) 595-1163
: INFORMATION FOR SEQ ID NO: 19
: SEQUENCE CHARACTERISTICS:
: LENGTH: 1076 amino acids
: TYPE: amino acid
: STRANDEDNESS: single
: TOPOLOGY: linear
:
US-09-074-658-19

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Query Match	2.9%;	Score 128.5;	DB 4;	Length 1076;
Best Local Similarity	20.1%;	Pred. No. 0.08;		
Matches 141;	Conservative 87;	Mismatches 244;	Indels 231;	Gaps 40

QY	3	KTYGIGSVAIIILATHTHGSVOLK----	HHMSGATDNQIAYI----	DD--SKGK----	48
Dd	148	KNYAAGGAIINELIY-ENWRSVEIKSANSSEYGGALSGVAIFTKATDIIKDGKMGV			206
QY	49	---AKAPRTKTMDOISAEGBISAEOLVTKTD--	OGVYTHSGDHYHFNGKVPYDAI		101
Dd	207	QTKTAYASKNNAMWNSVAAKKAGSFSGLLIYTRRQGEY- KAHDD--	AVOGSQSPDRA		265
QY	102	ISEELLMTPMYRFKOSQVYITEILLDGYIKNGVYUYLKRG-----	SKRNIPTKOIA		150
Dd	263	VA-----TTDPNNR--TELIANECC-----	ANGNTEACAGGQTKLOAKPTNVNDKYNVK		309
QY	157	EOYAVG-----	TRKAEKELAGVAAHLS--KEEYAAVNEAKRGQRYTTDDGYIFSPDII		208
Dd	310	DYTGPNRLIPMLRQDSKSLLRGYOLNDKHVYGGVEYIKQ--NYAMQKTV-----			365
QY	209	DDLGDALVPHGNHYHPIPKDLSPEL--	AAQOAYWSQKQCGARSPDRPTYPAPRG		265
Dd	362	---PAYAAVH-----	DIKSRLSNHAQNGVY--OONNIGERIJD-----		366
QY	266	RKRAPIPVTEPNCGOHOPDNGGYNHAPRPBPNDASQNHODEF-----	KGRTK		315
Dd	397	-----TIGDSQGYINAHGVY-----	DEKHQDRLGLEUYDWSKGENKWF		439
QY	316	ELLDQHLRLD-----	KYRVEEDGL--IFEPTOVIKSNAFGVYVPH-----		355
Dd	440	DVRYSQKODITELRSOLTNTHCTSYPHIDKNCSTPDYVKNPFSYKFEVDNNAKKEOHLIKAV			499
QY	356	-----GDHYHIIIPR-----	SOLSPLEMETADRYLAGQFEDDDSGSHSPSYKEV		400
Dd	500	FNKMAALGSTHHHNLNLOYGDIKFNSSLSRVEYRLA-----	THQSYQKLDYTPPSNP--		550
QY	401	THTELGHRIRKAYGKGLDCKPYDTSDAVYFSESJHSYDKSGVTAHKGDHFNHYIGFLEQ			460
Dd	551	---LPOKFKPI-LGSNNKPI-CLDAYGYGHD--	HPQACNAKKNSTYQNFALIKGIEQ		599
QY	461	YELDEVANWYAKKQADEL--AAALDQ--	EQGKRPLEFDIKYSR-----	KYTKDGKVG	511
Dd	600	Y-----	NQKNTNPKIDYQALIIDOYDKONPNSTLKPEEKIKQSLGOEKYKNIIDELGF		650
QY	512	MPKPD-----	GKGYFARQDLTOLIAFAEOELMKDKHNYRDIY		552
Dd	651	KAYDMLRNEMAGWTNDSQOMANKGTNIOY-----	PNQAIYVADDK-CKYS--		656
QY	553	DTGIEPRLADVSSLPHMAGNATYTQSSFYIPIIHIVVY			595
Dd	697	---ETNSYADCSITPRHI-----	SGDNFYIALKDMTINKY		729

```

1  NUMBER OF SEQUENCES: 7
2  CORRESPONDENCE ADDRESS:
3  ADDRESSEE: Finnegan, Henderson, Farabow, Garrett &
4  ADDRESSEE: Dinner L.L.P.
5  STREET: 1300 I Street, N.W.
6  CITY: Washington
7  STATE: D.C.
8  COUNTRY: USA
9  ZIP: 20005-3315
10 COMPUTER READABLE FORM:
11 MEDIUM TYPE: Floppy disk
12 OPERATING SYSTEM: IBM PC compatible
13 SOFTWARE: PatentIn Release #1.0, Version #1.30
14 CURRENT APPLICATION DATA:
15 APPLICATION NUMBER: US/08/663,112
16 FILING DATE: 26-NOV-1996
17 CLASSIFICATION: 435
18 ATTORNEY/AGENT INFORMATION:
19 NAME: Elnaudi, Carolyn P.
20 REGISTRATION NUMBER: 32,220
21 REFERENCE/DOCKET NUMBER: 06609,1488-00000
22 TELECOMMUNICATION INFORMATION:
23 TELEPHONE: 202-408-4000
24 TELEFAX: 202-408-4400
25 INFORMATION FOR SEQ. ID NO.: 2:
26 SEQUENCE CHARACTERISTICS:
27 LENGTH: 765 amino acids
28 TYPE: amino acid
29 TOPOLOGY: linear
30 MOLECULE TYPE: protein
31 US-08-663-112-2

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Query Match	2.9%;	Score 127;	DB 2;	Length 765;
Best Local Similarity	20.1%;	Pred. No. 0.063;		
Matches 137;	Conservative 90;	Mismatches 240;	Indels 214;	Gaps 34

QY	316	ELLDLQHLRLD-----KYRHYEEDGL--IFEPTOVIKSNAGVYVPH-----	355
Db	440	DVRSYDKQODTLTSLQTLNTHCSTTPHIDKNCSTDPVKNKPFVSKEVDNNAVEQHLLKAV	499
QY	356	-----GDHYHIIIPR-----SGLSPLEMLADRYLAGQTEDDSDGSHSKPSDKEV	400
Db	500	FNKKMALGSTHHHIIMLQGYDKFNSSLSRVEYRLA-----THQSYKLDYTPPSNP--	550
QY	401	THTELGHRIRKAYGKGLQSPDTSDAVYFESKESIHSYDKSGVTAKHGHFHYIGFGELEQ	460
Db	551	-----LPQKFKPI-LGSNNKPI-CLDAIGYGH-----HPQACNMAKNSTYQNFPAIRKGLGEQ	599
QY	461	YELDEVANWYAKAGQADEL--AAALDQ--EQGKEKPLEFDTKVSR-----KVTRDGKGY	511
Db	600	Y-----NQKNTNTRIDYQALIDYQDKONPNSTLKPFEKIKOSLQGEKYNNKIDELGF	650
QY	512	MPKPD-----GKDYFYARDQDLDTQLIAFAEQELMLKKKKHRYDIY	552
Db	651	KAYDLRNMAGMTNDSNQANAKGTDIYQ-----PNOATYVKKDC-KCYS--	696
QY	553	DTGIEPLRADVSSLPMHAGNATYDTGSSFYVIPHIDHIVVY	595
Db	697	-----ETNSYADCSTTPRHI-----SGDNFYFALKDNNTIKY	729
RESULT 13			
US-08-663-112-2			
Sequence 2, Application us/08663112			
Patent No. 5849503			
GENERAL INFORMATION:			
APPLICANT: WAGATSUMA, Masako			
APPLICANT: KURITA, No. 5849503iko			
TITLE OF INVENTION: MUTANT PROTEINS OF HUMAN DNA			
TITLE OF INVENTION: TOPOISOMERASE I			

QY 589 -----HHVVPYSMLTRDQATIKYVMOHPEVRPDIWSKPGHESSGVIPNVPIDKRBAG 643
Db 516 PELDQGEVVEFDLQND-----SIRKY-----NKPVVEKRV- 547
QY 644 MPNQIHSAEVOKALAEGRFATPDGYIFDPRD--VLARETFWMDGSFSIPRADSSLT 701
Db 548 FKNLQLEFMENKQ-----PEDDLFDRLNTGILNKLHLDLMG-----LTKAVF 589
QY 702 RTINKSDLSQAEWQAOELLA 722
Db 590 RTFNASTILO---QOLKELTA 607

RESULT 14
5231168-2
; Patent No. 5231168
; APPLICANT: DIEZIEL, MORTEN; BORRE, MARTIN; JERSEN, SOREN;
; VUUST, JENS; RIENECK, KLAUS; WIND, ANNETTE; JAKOBSEN, PALLE H.
; TITLE OF INVENTION: MALARIA ANTIGEN
; NUMBER OF SEQUENCES: 19
; CURRENT APPLICATION DATA:
; APPLICATION NUMBER: US/07/409,658
; FILING DATE: 18-SEP-1989
; SEQ ID NO:2
; LENGTH: 783
5231168-2

Query Match 2.9%; Score 127; DB 6; Length 783;
Best Local Similarity 17.9%; Pred. No. 0.065;
Matches 153; Conservative 147; Mismatches 309; Indels 246; Gaps 42;

QY 41 YIDDSKAKAPKTINKTMDQISAEQ-----ISAEQIVYKITDQVYTSQGH 88
Db 2 FVESEKSEHAEEN-----ESSLEEGHHEIIVPEONNEESGESKLVNDGEGEAEHHEH 57
QY 89 Y--HFYNGKVPYDAIIEELMTDPNTRFQSDVINELDGYIKVNGYVYLKPGSKR 146
Db 58 FSESEVSEINENEFVSDKSTEP--AEHEVYSE-----ESNEPEANNESSI 105
QY 147 KNIRTKQIALBOYAKTKKEKKEKGLAQAVALSKAEVAANVEAKRQRYTTDDGYITSPDT 206
Db 106 EEAHQEIVPEQ--NDESGESGLVD-----NE--EGDFEERPNHEEFEPDQ 147
QY 207 IIDLDGAYLVPH-----GNHYHYIPKKDLSPSE-----LAAQAQWYWSQKOG 248
Db 148 NDSLSSENLVESKSYSEPAHEIYSEKSYSEPAHEIYSEKSYSEPAHEIYSEVSEQ 207
QY 249 RGARPSDYRTPAPARERRAPIDVTPN--PGQHQPDNGYHAPRPENDAS----- 300
Db 208 SNNEPSEKKGYPVSKPFEEIEKYDVQPKIVDQIIEPNFVDSQPNQPEVPSFKIEK 267
QY 301 -----QNHQHDEFGKTFKELLDLHRLDKYHVEEDGLIFPTQVYKSNAGYVPHG 356
Db 268 VPSEENKHAHVDEYKE--KENVSEV-----VEKONSQSEVEIIPVNE----- 309
QY 357 DHHYIIPRSQLSPEMLADRYLAGOTEDDSDGSKSPS--DKREYTHFLGRIKAYG 413
Db 310 DEFEDVITEQLD-----LDHKTVDPEIYVEEIPSELHENEVAH----- 348
QY 414 KGLDGKPYDTSDAYVFSK-----ESHSVDSKSGVTAHKGHFNHYIGFGELEQVLEDEV 466
Db 349 -----PEIYIEVEVPEPQNNNEFOINEDKSA-----HI-----QHEIYEV 386
QY 467 ANMYAKAGQDELALALDQGEKEXPLFDTKKYSKRYTKDGKGYMMPKDGKRYFTARQ 526
Db 387 -----EELIPEDDKNEKYEHEIYVEEL-----LPEDKNE-----KQ 419
QY 527 LDLTQAFABQELMLDKKHRY--YDIVDTGIPRLAVVSSLPMHAGNATYDTGSSFYI 584
Db 420 HEIYEV-----EELIPEDDKNEKYEHEIYVE--VEEILPEDKNEKQGH-----I 461

QY 585 PHIDHHVVPYSMLTRDQATIKY--VMOHPEVRPDIWSKPGHESSGVIPNVPIDKRBAG 643
Db 462 VEVEEL-----LPEDKNEKYEHEIYVEELIPEDKNEKQHEIYVE--EELIPEDK--- 510
QY 644 MPNQIHSAEVOKALAEGRFATPDGYIFDPRDYLAKETFWMDGSFSIPRADSSLT 703
Db 511 --NEKQHEIYVEEELIPEDKNEKQHEIYVEEELIPEDKNEK--QGHYIYVE--EELIP 565
QY 704 INKSDLSQAEWQAOELLA-----KKNAGDAPTDK--PK--EKQAADKSNENQPSSEAK 755
Db 566 EDKNEKQHEIYVEEELIPEDKNEKQHEIYVEEELIPYIEVEVPSQTNNEIETIK 625
QY 756 EEEKESDDFDL--SLPDYGLDARATLEDHINOLAOKANIDPKYLINQPEVQFYNNKNGELV 813
Db 626 PEKKNEFSEVEKALPQ-----EPVYPTINENBNVTPK-----PSEGEST 665
QY 814 TYD--IKTLQQTNP 825
Db 666 KPDIVQIKIVQENKP 680

RESULT 15
US-08-296-791-6
; Sequence 6, Application US/08296791
; Patent No. 6245337
; GENERAL INFORMATION:

; APPLICANT: St. Geme III, Joseph W.
; APPLICANT: Falkow, Stanley
; TITLE OF INVENTION: Haemophilus Adherence and Penetration
; TITLE OF INVENTION: Protein
; NUMBER OF SEQUENCES: 9
; CORRESPONDENCE ADDRESS:
; ADDRESS: Flehr, Hobbach, Teet, Albritton & Herbert
; STREET: 4 Embarcadero Center, Suite 3400
; CITY: San Francisco
; STATE: California
; COUNTRY: United States
; ZIP: 94111-4187
; COMPUTER READABLE FORM:
; MEDIUM TYPE: Floppy disk
; COMPUTER: IBM PC compatible
; OPERATING SYSTEM: PC-DOS/MS-DOS
; SOFTWARE: Patentin Release #1.0, Version #1.25
; CURRENT APPLICATION DATA:
; APPLICATION NUMBER: US/08/296,791
; FILING DATE: 25-AUG-1994
; CLASSIFICATION: 435
; ATTORNEY/AGENT INFORMATION:
; NAME: Treccartin, Richard F.
; REGISTRATION NUMBER: 31,801
; REFERENCE/DOCKET NUMBER: A-59941/RFT/RMS
; TELECOMMUNICATION INFORMATION:
; TELEPHONE: (415) 781-1989
; TELEFAX: (415) 398-3249
; TELEX: 910 277299
; INFORMATION FOR SEQ ID NO: 6:
; SEQUENCE CHARACTERISTICS:
; LENGTH: 1848 amino acids
; TYPE: amino acid
; TOPOLOGY: unknown
US-08-296-791-6

Query Match 2.8%; Score 124; DB 4; Length 1848;
Best Local Similarity 16.9%; Pred. No. 0.42; Indels 302; Gaps 37;
Matches 153; Conservative 125; Mismatches 336;

QY 48 KAKAPKTNTKMDQISAEQISAEQIVYKITDQVYTSQGHVHFYNGK-----VPYDA 100
Db 487 KQKAANKV--QANSQGYISGRSTLVNDKQVDPRSIYFGRGRGLDNGSLTFD 544
QY 101 I-----ISEELMTDPN-----YRFQSDVINELDGYVYK--- 132

GenCore version 4.5
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OM protein - protein search, using sw model

Run on: December 3, 2001, 07:16:03 ; Search time 39.47 Seconds
(Without alignments)
451.548 Million cell updates/sec

Title: US-09-645-835A-4

Perfect score: 4080
Sequence: 1 MKTKRVIILVGLSSQLTL.....DHDHEDENEAKDEQNHAD 792

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Gapop 10.0 , Gapext 0.5

Searched: 212252 seqs, 22503292 residues

Total number of hits satisfying chosen parameters: 212252

Minimum DB seq length: 0

Maximum DB seq length: 2000000000

Post-processing: Minimum Match 08
Maximum Match 100%

Listing first 45 summaries

Database : Issued Patents.AA:*

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Pred. No. is the number of results predicted by chance to have a
score greater than or equal to the score of the result being printed,
and is derived by analysis of the total score distribution.

SUMMARIES

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1	322.5	7.9	746	5	PCT-US95-10509-2
2	223	5.7	447	4	US-08-961-083-182
3	223	5.5	796	4	US-08-961-083-56
4	204	5.0	763	4	US-08-961-083-66
5	168	4.1	708	4	US-09-131-648-2
6	167	4.1	1112	4	US-09-353-585-3
7	167	4.1	1112	4	US-09-353-585-2
8	160	3.9	968	4	US-09-180-439-3
9	160	3.9	968	4	US-09-180-439-4
10	159	3.9	799	4	US-09-180-439-6
11	155.5	3.8	359	1	US-08-303-238-4
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18	152.5	3.7	985	2	US-08-473-553A-2
19	151	3.7	806	4	US-08-945-983-2
20	151	3.7	863	4	US-08-666-271-2
21	150.5	3.7	353	6	5340934-4
22	150	3.7	1016	4	US-09-180-439-8
23	150	3.7	1091	3	US-08-986-485-5
24	149.5	3.7	342	1	US-08-272-919-2
25	149.5	3.7	342	1	US-08-619-916-2
26	149.5	3.7	342	5	PCT-US95-08542-2
27	149	3.7	605	4	US-09-063-950-5

28	145	3.6	330	1	US-08-238-163-2	Sequence 2, Appli
29	145	3.6	523	2	US-08-473-553A-3	Sequence 3, Appli
30	144.5	3.5	673	4	US-09-063-950-2	Sequence 2, Appli
31	144	3.5	220	1	US-07-991-867B-11	Sequence 11, Appli
32	144	3.5	220	1	US-08-107-755A-11	Sequence 11, Appli
33	144	3.5	220	2	US-08-544-332-11	Sequence 11, Appli
34	141.5	3.5	1196	4	US-08-881-706-2	Sequence 11, Appli
35	140.5	3.4	2756	1	US-08-375-709-11	Sequence 11, Appli
36	140.5	3.4	2756	1	US-08-752-928-11	Sequence 11, Appli
37	140.5	3.4	2756	1	US-09-090-793-7	Sequence 7, Appli
38	140	3.4	282	1	US-08-442-063A-45	Sequence 45, Appli
39	140	3.4	307	1	US-08-442-063A-48	Sequence 48, Appli
40	140	3.4	333	1	US-08-442-063A-27	Sequence 27, Appli
41	140	3.4	1101	4	US-08-986-485-2	Sequence 2, Appli
42	138.5	3.4	2285	4	US-09-308-375-2	Sequence 2, Appli
43	136	3.3	1480	3	US-09-191-647-7	Sequence 2, Appli
44	136	3.3	1480	4	US-09-540-245A-7	Sequence 7, Appli
45	136	3.3	1480	4	US-09-540-153-7	Sequence 7, Appli

ALIGNMENTS

RESULT 1
PCT-US95-10509-2

; Sequence 2, Application PC/TUS9510509

; GENERAL INFORMATION:

; APPLICANT: Campbell, Priscilla

; APPLICANT: Potter, Terry

; APPLICANT: Sawyer, Richard

; APPLICANT: Drevels, Douglas

; APPLICANT: Freed, John

; TITLE OF INVENTION: INTERNALIN PRODUCTS AND PROCESSES

; NUMBER OF SEQUENCES: 6

; CORRESPONDENCE ADDRESS:

; ADDRESSEE: Sheridan Ross & McIntosh

; STREET: 1700 Lincoln Street, 35th Floor

; CITY: Denver

; STATE: Colorado

; COUNTRY: U.S.A.

; ZIP: 80203

; COMPUTER READABLE FORM:

; MEDIUM TYPE: Floppy disk

; COMPUTER: IBM PC compatible

; OPERATING SYSTEM: PC-DOS/MS-DOS

; SOFTWARE: Patent Release #1.0, Version #1.25

; CURRENT APPLICATION DATA:

; APPLICATION NUMBER: PCT/US95/10509

; FILING DATE: 18 AUGUST 1995

; CLASSIFICATION:

; ATTORNEY/AGENT INFORMATION:

; NAME: Kovarik, Joseph E.

; REGISTRATION NUMBER: 33, 005

; REFERENCE/DOCKET NUMBER: 2879-11-PCT

; TELEPHONE: 303/863-9700

; TELEFAX: 303/863-0223

; INFORMATION FOR SEQ ID NO: 2:

; SEQUENCE CHARACTERISTICS:

; LENGTH: 746 amino acids

; TYPE: amino acid

; TOPOLOGY: linear

; MOLECULE TYPE: protein

; PCT-US95-10509-2

Query Match 7.9%, Score 322.5; DB 5; Length 746;

Best Local Similarity 30.6%; Pred. No. 1.1e-16;

Matches 92; Conservative 66; Mismatches 136; Indels 7; Gaps 4;

OY 399 VKLDGSRK--DPQKRGSLTPNLEFTIGFPPKIDISVPLQFKKJLQMLMTKGTVD 456

DB 2 IKTYLGKNTVTVDSQIDLDQVTVTLQADRLG---IKSIDGLEIINLTQINFSNQLTD 58

QY 457 YRFLDNMPLEGIDISONNLIKDISFLSKYKNTLVAAANGIEDIRPLGOLPKFLVLS 516
DB 59 ITPLKDLTKLVLDLMMNNNOIADITPLANTLNLGLTLFNNQIIDIDPLKNTLNLBLELS 118
QY 517 NKKISDPLASIHOOELHIDNNQITDLSPVSHKESLTVVDSRRNADVLATL-0APKL 575
DB 119 SNTSDLSALSGLTNQOLSF-GNQVTDLKPPLANLTLEKDLSSKKVSDISVLATLNL 177
QY 576 ETLMVNDTKVSHLDFLKNPNLSSLSINRAQOLSEIGIEASVIYVVEAGNOIKSLVLK 635
DB 178 ESILATNNOISDITPLGILTNLDELSTNGNQIKDIGLSTLNLTLDLANNOISMLAPL 237
QY 636 DKQSLTFIDVNTQNLTSLEGVNNFTALDLSKKNQTLVNNLSKKNKYNTNIDISHNNI 695
DB 238 SGLTKLEKLGANOISNISPLAGLTALNLLENQLEDISPSMLKNTLYLTLYNNI 297
QY 696 S 696
DB 298 S 298
RESULT 2
US-08-961-083-182
; Sequence 182, Application US/08961083
; Patent No. 6159469
; GENERAL INFORMATION:
; APPLICANT: Choi et. al.
; TITLE OF INVENTION: Streptococcus pneumoniae Antigen and Vaccines
; NUMBER OF SEQUENCES: 452
; CORRESPONDENCE ADDRESS:
; ADDRESSEE: Human Genome Sciences, Inc.
; STREET: 9410 Key West Avenue
; CITY: Rockville
; STATE: Maryland
; COUNTRY: USA
; ZIP: 20850
; COMPUTER READABLE FORM:
; MEDIUM TYPE: Diskette, 3.50 inch, 1.4mb storage
; COMPUTER: HP Vectra 486/33
; OPERATING SYSTEM: MSDOS version 6.2
; SOFTWARE: ASCII Text
; CURRENT APPLICATION DATA:
; APPLICATION NUMBER: US/08/961,083
; FILING DATE:
; CLASSIFICATION: 435
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER:
; FILING DATE:
; ATTORNEY/AGENT INFORMATION:
; NAME: Brookes, A. Anders
; REGISTRATION NUMBER: 36,373
; REFERENCE/DOCKET NUMBER: PB340P2
; TELECOMMUNICATION INFORMATION:
; TELEPHONE: (301) 309-8504
; TELEFAX: (301) 309-8512
; INFORMATION FOR SEQ ID NO: 182:
; SEQUENCE CHARACTERISTICS:
; LENGTH: 447 amino acids
; TYPE: amino acid
; STRANDEDNESS: single
; TOPOLOGY: linear
; MOLECULE TYPE: protein
US-08-961-083-182
Query Match 5.7%; Score 233; DB 4; Length 447;
Best Local Similarity 30.1%; Pred. No. 4.1e-10;
Matches 75; Conservative 36; Mismatches 96; Indels 42; Gaps 12;
QY 16 SQTLLIACQSGNGCTYPIKTKOSRKGMTSNKIKIKSKTKNTKHKVAGVDFPT----- 70
DB 213 SGLSYSTASDNN-----TOSVAKGSYS--KPANKSENLOSLLKEL--YDPSAQRYS 261

QY 71 -DDGFILTKDSKILSKTDOGIYVDHDSHFLFYADLKG--SPEFYILP---KGASL--- 121
DB 262 ESDGLVFP-DPAKITSRTPNGVALIPGHDYHFTPYKLSALEEKARMPISGTSVSTN 320
QY 122 AKP-----AVALAASQGTSK-VADPHHHEFPADIVAEDALGYVARRHDPHYIL 172
DB 321 AKPNEVVSLSGLSSNPSSLTTSKELSSASDGYIFENPKDIYEETATAYIVRHGDHPHYIP 380
QY 173 KSSLSGQTOAQAKOVATRLPOTSSLVSTATANGLPGLHFPISDGFQNGQIVGVTDSI 232
DB 381 KSNQIOGPTLPNNLSLAT--PSPSLPINPQTSH-----EKHEBDGVPANRIIADESGF 433
QY 233 LVYDHGHLH 241
DB 434 VMSHGDHNN 442
RESULT 3
US-08-961-083-56
; Sequence 56, Application US/08961083
; Patent No. 6159469
; GENERAL INFORMATION:
; APPLICANT: Choi et. al.
; TITLE OF INVENTION: Streptococcus pneumoniae Antigen and Vaccines
; NUMBER OF SEQUENCES: 452
; CORRESPONDENCE ADDRESS:
; ADDRESSEE: Human Genome Sciences, Inc.
; STREET: 9410 Key West Avenue
; CITY: Rockville
; STATE: Maryland
; COUNTRY: USA
; ZIP: 20850
; COMPUTER READABLE FORM:
; MEDIUM TYPE: Diskette, 3.50 inch, 1.4mb storage
; COMPUTER: HP Vectra 486/33
; OPERATING SYSTEM: MSDOS version 6.2
; SOFTWARE: ASCII Text
; CURRENT APPLICATION DATA:
; APPLICATION NUMBER: US/08/961,083
; FILING DATE:
; CLASSIFICATION: 435
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER:
; FILING DATE:
; ATTORNEY/AGENT INFORMATION:
; NAME: Brookes, A. Anders
; REGISTRATION NUMBER: 36,373
; REFERENCE/DOCKET NUMBER: PB340P2
; TELECOMMUNICATION INFORMATION:
; TELEPHONE: (301) 309-8504
; TELEFAX: (301) 309-8512
; INFORMATION FOR SEQ ID NO: 56:
; SEQUENCE CHARACTERISTICS:
; LENGTH: 796 amino acids
; TYPE: amino acid
; STRANDEDNESS: single
; TOPOLOGY: linear
; MOLECULE TYPE: protein
US-08-961-083-56
Query Match 5.5%; Score 223; DB 4; Length 796;
Best Local Similarity 19.5%; Pred. No. 5.8e-09;
Matches 168; Conservative 116; Mismatches 279; Indels 300; Gaps 42;
QY 30 TYPIKTKOSRKGMTSNKIKIKSKTKNTKHKVAGVDFPTDDGFIILKDSKILSKTDOG 89
DB 1 SYELGLYQARVYKNNRVSIDGKQATOKT-ENLIPDEVSKREG--INAEQIVIKITDOG 57
QY 90 IYVDHGHSHFLFYADLKSPEFYILPKGASLAKRAVAVQRAASQGTSKVADPHHHEFPNP 149
DB 58 YVTSHDHNY-----YNGKVPYDALISSELL-----WKDE--NYKLKD 94


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QY 624 AEG-----NQIKS-----LVYKDKQSGSL-----PFLVDTGNQL 651
Db 584 AKGAAGATVNRKAKAKKVPDRMRPNQLQYTYEYKNGSLIIPHYDHNHKKEMFD----- 637
QY 652 TSLBQV-----NNFALDILSVSKNQLTNVNLSPKNTVTYINIDISNNIISLADLKINEQHI 707
Db 638 ---BCLYEAPKGYTLDELATVYVEYEHDP-ERPHS-----DNGFGNAS-----DHY 680
QY 708 PEALAKNFPAYEGSMYNGST---AEBKAMATKAKSAQOESASHD--YNNHNTYDEEE 762
Db 681 QR--NKN-----GQATNQTKEKPSSEKQTEKPEETREKPEKPOSEKPEKPEEP 732
QY 763 GHANEHRKDDHDEHEDENEAKD 786
Db 733 SPESEEPQVETKEVKEKLEAREAD 756

RESULT 5
US-09-131-648-2
; Sequence 2, Application US/09131648
; Patent No. 6168920
; GENERAL INFORMATION:
; APPLICANT: Hillman, Jennifer L.
; APPLICANT: Yue, Henry
; APPLICANT: Corley, Neil C.
; APPLICANT: Guegler, Karl J.
; APPLICANT: Paterson, Chandra
; TITLE OF INVENTION: EXTRACELLULAR ADHESIVE PROTEINS
; FILE REFERENCE: PF-0576 US
; CURRENT APPLICATION NUMBER: US/09/131,648
; CURRENT FILING DATE: 1998-08-10
; NUMBER OF SEQ ID NOS: 5
; SOFTWARE: PERL Program
; SEQ ID NO 2
; LENGTH: 708
; TYPE: PRT
; ORGANISM: Homo sapiens
; FEATURE: -
; OTHER INFORMATION: 2687731
US-09-131-648-2

Query Match 4.1%; Score 168; DB 4; Length 708;
Best Local Similarity 21.7%; Pred. No. 8.6e-05;
Matches 113; Conservative 80; Mismatches 158; Indels 170; Gaps 24

QY 380 TPPSPNSKQDNNMKKELATVYIKLDGSRDP-----LQKGLSLPNIETI 425
Db 88 TDEPVNLTGDLISQNNLSVSTNINV--KKMPLLSVYLEENKLTLEPEKCLSELSNLOEL 145
QY 426 GIGFTPIKDIPVLPQKKKKOL-----MTKTGVNDRFELNMPOLGDISON--NLK 477
Db 146 YIHNHLSTISPC-ATIGLHNLRLHLNSNRLOMINSKWFALPNLITLWIGENPIIRIK 204
QY 478 DISFLSKYKNLTLVAADN-----GIEDIR-----PLQGLNPKF 512
Db 205 DMNFKPLINLRSLVIGLITLPIPNALVGLLENLESISFYDNRLIKVPVHALQVYNAKF 264
QY 513 LVYSNNKISDL--SPLASIHOLOEHLIDNNQ---ITDLSPIYSKHSSTLYVDSRNADVLI 567
Db 265 LDIANKPPIKIRRGDSNNHLHKEIGINMPRELISIDSLAVDNPDLRKLEATVNNPRLSY 324
QY 568 ---ATLQAPKLETLVANDTVKVSHL--DFLKNPNLSLSLT-----NRA 605
Db 325 IHNNAFFRLPKLESILNLSNALSALYHGTIESLPNKEISHSNPIRCDCVITRMAMMKNKT 384
QY 606 QLOSLP-----GTEASSVT---V 620
Db 385 NIFEMPDLSFCVDPPEOGQVNRQVHRDMMEICLPLIAPESPSMLNVEAGSYVSFHC 444
QY 621 RVAEAE-----GNQIKSLYIKDK-----QGSILPDIYGNQDLSLEG-----VN 658
Db 445 PAAAEQAPREIYVITTSQGKLLPNTLITDFFYHSGT---LDING--VTREGGGLYCIATF 499

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OY      659   NFTAALDILSVSNQTLTNVLSKPKRKTJNIDISHNNISLADKLINQHHPLEAIKNFPAY 718  
| : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | :  
DB     500   NLVGADIASV-----MIKDGSPFDONNGSL-----NIKIROIDAN-----SIVSMKA- 543  
  
OY      719   YEGSWGNGTAEERAAATKAKESAQA---SESHDYNNHH 756  
| : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | :  
DB     544   --SSKILLSVKMTAFVTKTENSHAAGARIPDVKYNYLTTH 582  
  
RESULT        6  
US-09-353-585-2  
? Sequence 2, Application US/09353585  
? Patent No. 6287865  
? GENERAL INFORMATION:  
APPLICANT: Dixon, Mark S  
            Jones, David A  
            Jones, Jonathan DG  
TITLE OF INVENTION: Plant pathogen resistance genes and uses thereof  
NUMBER OF SEQUENCES: 15  
CORRESPONDENCE ADDRESSES:  
ADDRESSEE: Nixon & Vanderhye PC  
STREET: 8th Floor, 1100 No. 6287865th Glebe Road  
CITY: Arlington  
STATE: Virginia  
COUNTRY: United States of America  
ZIP: 22201-4714  
COMPUTER READABLE FORM:  
MEDIUM TYPE: Floppy disk  
COMPUTER: IBM PC compatible  
OPERATING SYSTEM: PC-DOS/MS-DOS  
SOFTWARE: Patentin Release #1.0, Version #1.25 (EPO)  
CURRENT APPLICATION DATA:  
APPLICATION NUMBER: US/09/353,585  
FILING DATE: 15-Jul-1999  
CLASSIFICATION: C12N 15/29, 15/82, A01H 5/00, A01N 65/00, C12Q 1/68  
  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 08/930,277  
FILING DATE: 27-OCT-1997  
APPLICATION NUMBER: PCT/GB96/00785  
FILING DATE: 01-APR-1996  
APPLICATION NUMBER: GB 9506558..5  
FILING DATE: 31-MAR-1995  
ATTORNEY/AGENT INFORMATION:  
NAME: Ms Mary J Wilson  
REGISTRATION NUMBER: 32,955  
REFERENCE/DOCKET NUMBER: 620-69  
TELECOMMUNICATION INFORMATION:  
TELEPHONE: (703) 816-4100  
TELEFAX: (703) 816-4100  
INFORMATION FOR SEQ ID NO: 2:  
SEQUENCE CHARACTERISTICS:  
LENGTH: 1112 amino acids  
TYPE: amino acid  
STRANDEDNESS: <unknown>  
TOPOLOGY: linear  
MOLECULE TYPE: protein  
HYPOTHEetical: YES  
ORIGINAL SOURCE:  
ORGANISM: Tomato  
STRAIN: Cf2  
US-09-353-585-2
```

Query Match 4.1%; Score 167; DB 4; Length 1112;

Best Local Similarity 24.3% ; Pred.No. 0.0002;

Matches 104; Conservative 49; Mismatches 141; Indels 134; Gaps 20.

OY 396 LATVIKKLDGSRRDPLORGK-----LSLLPNTETIGT-----GFPIKIRSYVLDFKKL 444
| : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | :

Db 118 LTNLYVLDLNNN---QISGTFIPQIGLAKIQRIRFHNQNGFIP-KEIG-----YL 166
QY 445 KQLMTKGTGYDYRFLDNNMPQLEGIDISQNNLKDISFLSKYK-----LT 489
Db 167 RSLTKLSLGI---NFLSG-----SIPASVGNLNNLSFLYLYNNQSGSIPPEISYLSRLT 218
QY 490 LVAAADNGIEDIRP--LGQLPNLFKFLVLSNNKIS-----DLS-----524
Db 219 ELDSLDAALNGSIPASIGLNNLSFLYLYNNQSGSIPPEICYSRLTYLDLSGNALNGS 278
QY 525 ---PLASHQLOELHIDNNOITDLSP--VSHKESLYVVDLSRNA-----DVDLATLQAPK 574
Db 279 IPASIGLNNLSFLYLYNNQSGSIPPEIGYLSRLTYLDLSGNALNGSIPASIGLNNLS 338
QY 575 LETLVNDTKVSHLDFLKNPNLSL-----SINRAQOSLEGIEASV 618
Db 339 RLNLVNNQSGSIPASIGLNNLSMLYLYNNQSGSIPASIGLNNLSMLYLYNNQSGS 398
QY 619 IYRVEAEGNQIKSLVLDKQ-----GSLTFDYTGNOITSL--EGVNNFTALD 664
Db 399 IPASIGLNNLSRLYLYNNQSGSIPPEIGYLSRLTYLDLSNNNGSIPASFGNMSNLA 458
QY 665 ILSVSKNOLTVNLSKPN---KVTNIDISH-----NNISLADKLNE- 704
Db 459 FLFLYENQLAS---SVPEEIGYLSRLVLDLSGNALNGSIPASFGNLSRLNLVNNQL 515
QY 705 -QHPEAI 711
Db 516 SGSIPEI 523

RESULT 7
US-09-353-585-3
Sequence 3, Application US/09353585
Patent No. 6287865
GENERAL INFORMATION:
APPLICANT: Dixon, Mark S
Jones, Jonathan DG
TITLE OF INVENTION: Plant pathogen resistance genes and uses thereof
NUMBER OF SEQUENCES: 15
CORRESPONDENCE ADDRESS:
ADDRESSEE: Nixon & Vanderhye PC
STREET: 8th Floor, 1100 No. 6287865th Giebe Road
CITY: Arlington
STATE: Virginia
COUNTRY: United States of America
ZIP: 22201-4714
COMPUTER READABLE FORM:
MEDIUM TYPE: floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patent Release #1.0, Version #1.25 (EPO)
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/09/353,585
FILING DATE: 15-Jul-1999
CLASSIFICATION: C12N 15/29, 15/82, A01H 5/00, A01N 65/00, C12Q 1/68
PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 08/930,277
FILING DATE: 27-OCT-1997
APPLICATION NUMBER: PCT/GB96/00785
FILING DATE: 01-APR-1996
APPLICATION NUMBER: GB 9506658.5
FILING DATE: 31-MAR-1995
ATTORNEY/AGENT INFORMATION:
NAME: Ms Mary J Wilson
REGISTRATION NUMBER: 32,955
REFERENCE/DOCKET NUMBER: 620-69
TELECOMMUNICATION INFORMATION:
TELEPHONE: (703) 816-4000
TELEFAX: (703) 816-4100

INFORMATION FOR SEQ ID NO: 3:
SEQUENCE CHARACTERISTICS:
LENGTH: 1112 amino acids
TYPE: amino acid
STRANDEDNESS: <unknown>
TOPOLOGY: linear
MOLECULE TYPE: protein
HYPOTHETICAL: YES
ORIGINAL SOURCE:
ORGANISM: Tomato
STRAIN: Cf2
SEQUENCE DESCRIPTION: SEQ ID NO: 3:
US-09-353-585-3

Query Match 4.1%; Score 167; DB 4; Length 1112;
Best Local Similarity 24.3%; Pred. No. 0.0002;
Matches 104; Conservative 49; Mismatches 141; Indels 134; Gaps 20;

QY 396 LATVIRKIDGSRKDPQRRG-----LSLPNLETUIGI-----GFTPIKDISPVLOFRKL 444
Db 118 LTNLYVLDLNNN---QISGTFIPQIGLAKIQRIRFHNQNGFIP-KEIG-----YL 166
QY 445 KQLMTKGTGYDYRFLDNNMPQLEGIDISQNNLKDISFLSKYK-----LT 489
Db 167 RSLTKLSLGI---NFLSG-----SIPASVGNLNNLSFLYLYNNQSGSIPPEISYLSRLT 218
QY 490 LVAAADNGIEDIRP--LGQLPNLFKFLVLSNNKIS-----DLS-----524
Db 219 ELDSLDAALNGSIPASIGLNNLSMLYLYNNQSGSIPASIGLNNLSMLYLYNNQSGS 398
QY 525 ---PLASHQLOELHIDNNOITDLSP--VSHKESLYVVDLSRNA-----DVDLATLQAPK 574
Db 279 IPASIGLNNLSFLYLYNNQSGSIPPEIGYLSRLTYLDLSGNALNGSIPASIGLNNLS 338
QY 575 LETLVNDTKVSHLDFLKNPNLSL-----SINRAQOSLEGIEASV 618
Db 339 RLNLVNNQSGSIPASIGLNNLSMLYLYNNQSGSIPASIGLNNLSMLYLYNNQSGS 398
QY 619 IYRVEAEGNQIKSLVLDKQ-----GSLTFDYTGNOITSL--EGVNNFTALD 664
Db 399 IPASIGLNNLSRLYLYNNQSGSIPPEIGYLSRLTYLDLSNNNGSIPASFGNMSNLA 458
QY 665 ILSVSKNOLTVNLSKPN---KVTNIDISH-----NNISLADKLNE- 704
Db 459 FLFLYENQLAS---SVPEEIGYLSRLVLDLSGNALNGSIPASFGNLSRLNLVNNQL 515
QY 705 -QHPEAI 711
Db 516 SGSIPEI 523

RESULT 8
US-09-180-439-3
Sequence 3, Application US/09180439
Patent No. 622532
GENERAL INFORMATION:
APPLICANT: Dixon, Mark S
Hatzixanthidis, Kostas
APPLICANT: Jones, David A
TITLE OF INVENTION: Plant pathogen resistance genes and uses thereof
FILE REFERENCE: 620 - 53
CURRENT APPLICATION NUMBER: US/09/180,439
FILING DATE: 1998-12-06
EARLIER APPLICATION NUMBER: PCT/GB97/01249
EARLIER FILING DATE: 1997-05-08
EARLIER APPLICATION NUMBER: GB 9609681.3
EARLIER FILING DATE: 1996-05-09
EARLIER APPLICATION NUMBER: GB 9619924.5
EARLIER FILING DATE: 1996-09-24
NUMBER OF SEQ ID NOS: 10
SOFTWARE: Patentin Ver. 2.0

SEQ ID NO 6
LENGTH: 799
TYPE: PRT
ORGANISM: Lycopersicon esculentum
US-09-180-439-6

Query Match 3.9%; Score 159; DB 4; Length 799;
Best Local Similarity 22.6%; Pred. No. 0.00051;
Matches 98; Conservative 61; Mismatches 146; Indels 128; Gaps 20;

QY 395 WLAVYIKLDLG-----SRKDPLOKRGSLPLNLELGI-----GFTPIKDISPVLOFKKL 444
DB 165 YLRSLTKLSIGINFLSSGIP--ASLGNMNLSPFLFYENQLSGFIP-EEIGYLRSLTKL 220
QY 445 KQLMTKTGYDYRFLDNMPQLEGIDISQNNLKDISFLSKYK-----LT 489
DB 221 S-----LDINFLSG-----STPASGLNLSFLYLYNNQLSSGISEEIGYLRSLT 266
QY 490 LVAAADNGIEDIRP--IGQLPNLKFVLSNNKISDLSL--LASLHQLQELHIDNNQITDL 545
DB 267 YLDKKNALNGISIPASIGLNLSRLYLNNQLSGISEEIGYLSLTNLYLGNNSLIGL 326
QY 546 SPVS-----HKESLYVVDLSRN-----ADV 566
DB 327 IPASFGNMRNLQALFLDNNLIGEIFSVGCLSTLELYMRNNLKGKVPQCLGNISDL 386
QY 567 LATIQ-----APKLETLVNDTKVSHLDELKNN-----PNLSLSINRAQLQSLG- 612
DB 387 VLSMSSNSFSELPSSISNLSTLKIIDFGRRNLGALIPQCGNISSIQVDMDONNKLSGT 446
QY 613 -----TEASSVYRVEAGNQIKSLV--LKDKQSLFLVDYGNOL--TSLEGVNNFTALD 664
DB 447 LPTNFSIGCSLISLNLGNLEDELPMSLDNCKKIQVLDLGDNDLPFPMWLGTPELR 506
QY 665 ILVSKNOL-----TVNLSKPKTKVTNIDISHNNTSLADLKINBOHIEATAKKNPAV 718
DB 507 VLRLTSKLNKHPITSSGAELMFPLRI--IDLNRNAPS-----ODLPSTLEHL-- 553
QY 719 YEGSMVNGTAEE 731
DB 554 -KGMRTVDKTMEE 565

RESULT 11
US-08-303-238-4
Sequence 4, Application US/08303238
Patent No. 5654270
GENERAL INFORMATION:
APPLICANT: RUOSLAHTI, ERKKI I.
APPLICANT: LONGAKER, MICHAEL T.
APPLICANT: WHITBY, DAVID J.
APPLICANT: HARPER, JOHN R.
APPLICANT: PIERSCHBACHER, MICHAEL D.
APPLICANT: BORDER, WAYNE A.
TITLE OF INVENTION: INHIBITORS OF CELL REGULATORY FACTORS
TITLE OF INVENTION: AND METHODS FOR PREVENTING OR REDUCING SCARRING
NUMBER OF SEQUENCES: 8
CORRESPONDENCE ADDRESS:
ADDRESSEE: CAMPBELL AND FLORES
STREET: 4370 LA JOLLA VILLAGE DRIVE, SUITE 700
CITY: SAN DIEGO
STATE: CALIFORNIA
COUNTRY: UNITED STATES
ZIP: 92122
COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patentin Release #1.0, Version #1.25
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/303,238
FILING DATE:

CLASSIFICATION: 514
PRIORITY APPLICATION DATA:
APPLICATION NUMBER: US 07/978,931
FILING DATE: 17-NOV-1992
ATTORNEY/AGENT INFORMATION:
NAME: KONSKI, ANTOINETTE F.
REGISTRATION NUMBER: 34, 202
REFERENCE/DOCKET NUMBER: P-LA 9453
TELECOMMUNICATION INFORMATION:
TELEPHONE: 619-535-9001
TELEFAX: 619-535-8949
INFORMATION FOR SEQ ID NO: 4:
SEQUENCE CHARACTERISTICS:
LENGTH: 359 amino acids
TYPE: amino acid
TOPOLOGY: linear
US-08-303-238-4

Query Match 3.8%; Score 155.5; DB 1; Length 359;
Best Local Similarity 25.8%; Pred. No. 0.00029;
Matches 93; Conservative 51; Mismatches 101; Indels 115; Gaps 22;

QY 397 ATVIKLDLG--SRKDPLOKRGSLPLNLELGI-----FTPIKDISPVLOFK--- 442
DB 3 ATIIILLAQVSWAGPFGQRGLEDFMLEDEASGIGPEYDDDFEP--SLGVCFCRCQC 60
QY 443 KQLQMTKTGYDYRFLDNMPQLEGIDISQNNLKDISFLSKYKULTVAAADNGIEDIR 502
DB 61 HLRVQCSDLG-----LDKVP-----PDTLLDLDNNKITEIK 97
QY 503 --PLGQLPNLKFVLSNNKISDLSL--LASLHQLQELHIDNNQITDLSVSKESLTVVD 558
DB 98 DGGFKNLKMLHLLIVNNKISKVSPGAFTPVYKLELYLSKNOLELPERMK----- 150
QY 559 LSRNADVDIATQAPKLEFLVNDTKVSHLD-----LKNPNLSLSINRAQLQ 608
DB 151 -----TLOELRAHENEI-----TVRKVFTEGNNQIVIELGTNP-LKSSGINGAFQ 197
QY 609 SLEGIEASSVYRVEAGNQIKSLVLDKQ--SLTFLDYGNOLT-----SLEGVNNF 660
DB 198 GMKKLS-----YIRI-ADTN-----ITSIPQGLPSTLEHLHGNKISRDAASLGLNNL 247
QY 661 TALDI-----LSVSKNQLTVN--NLSPKTKVTNIDISHNNTSL 697
DB 248 AKGLSFNSISAVDNGSLANTPHRLHLDNNKLTIRVPGGLAF-HKYLQVYLVHNNNISV 306

RESULT 12
US-08-458-834-4
Sequence 4, Application US/08458834
Patent No. 6277812
GENERAL INFORMATION:
APPLICANT: RUOSLAHTI, ERKKI I.
APPLICANT: LONGAKER, MICHAEL T.
APPLICANT: WHITBY, DAVID J.
APPLICANT: HARPER, JOHN R.
APPLICANT: PIERSCHBACHER, MICHAEL D.
APPLICANT: BORDER, WAYNE A.
TITLE OF INVENTION: INHIBITORS OF CELL REGULATORY FACTORS
TITLE OF INVENTION: AND METHODS FOR PREVENTING OR REDUCING SCARRING
NUMBER OF SEQUENCES: 8
CORRESPONDENCE ADDRESS:
ADDRESSEE: CAMPBELL AND FLORES
STREET: 4370 LA JOLLA VILLAGE DRIVE, SUITE 700
CITY: SAN DIEGO
STATE: CALIFORNIA
COUNTRY: UNITED STATES
ZIP: 92122
COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible

```

; OPERATING SYSTEM: PC-DOS/MS-DOS
; SOFTWARE: Patentin Release #1.0, Version #1.25
; CURRENT APPLICATION DATA:
; APPLICATION NUMBER: US/08/458,834
; FILING DATE:
; CLASSIFICATION: 514
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: US 07/978,931
; FILING DATE: 17-NOV-1992
; ATTORNEY/AGENT INFORMATION:
; NAME: KONSKI, ANTOINETTE F.
; REGISTRATION NUMBER: 34,202
; REFERENCE/DOCKET NUMBER: P-LA 9453
; TELECOMMUNICATION INFORMATION:
; TELEPHONE: 619-535-9001
; TELEFAX: 619-535-8949
; INFORMATION FOR SEQ ID NO: 4:
; SEQUENCE CHARACTERISTICS:
; LENGTH: 359 amino acids
; TYPE: amino acid
; TOPOLOGY: linear
; MOLECULE TYPE: protein
; US-08-458-834-4

```

```

Query Match 3.8%; Score 155.5; DB 4; Length 359;
Best Local Similarity 25.8%; Pred. No. 0.00029;
Matches 93; Conservative 51; Mismatches 101; Indels 115; Gaps 22;

```

```

QY 397 ATVIKLDLG--SRKDPLOKGL-SLPLNLETIG-----FTPIKIDSPVLQFK--- 442
| : : : : : : : : : : : : : : : : : : : : : : : : : : : : : :
Db 3 ATIIILLIAQVSMAGPFQOGRGLPFMLEDEASIGPEVPDDRDPEP--SLGPVCPFFQCQ 60
| : : : : : : : : : : : : : : : : : : : : : : : : : : : : : :
QY 443 KIKQILLMKTKGVTVYRFLDNMPQLEGIDISQNNKDISFLSKYNNKLLVAAADGICDIR 502
| : : : : : : : : : : : : : : : : : : : : : : : : : : : : : :
Db 61 HLRVQCSDLG-----LDKVP-----KDLR-----PDTLLDLQNNKITEIK 97
| : : : : : : : : : : : : : : : : : : : : : : : : : : : : : :
QY 503 --PLGOLFPLKFLVLSNNKISDLSLSP--LASLHQLQELHIDNNQITDLSPVSHKESLTIVD 558
| : : : : : : : : : : : : : : : : : : : : : : : : : : : : : :
Db 98 DGDENKLNKLNAILLVNNKISKVSPGAFPLVKLERLYLSNQKLEPEKMPK----- 150
| : : : : : : : : : : : : : : : : : : : : : : : : : : : : : :
QY 559 LSRNADVDLTLQAPKLETLVNDTKVSHDF-----LKNPNLSLSLNRKQLO 608
| : : : : : : : : : : : : : : : : : : : : : : : : : : : : : :
Db 151 -----TLQELRAHENEI-----TKVRKYTFNGLNQIMIVETLQTN-LKSSGLENGAFQ 197
| : : : : : : : : : : : : : : : : : : : : : : : : : : : : : :
QY 609 SLEGASVIVRYEAEQNQISLVLDKQK--SLFELDYTGNOQL-----SLEGVNF 660
| : : : : : : : : : : : : : : : : : : : : : : : : : : : : : :
Db 198 GMRKLS---YTRI-ADTN-----TTSIPQGLPSPSLTELHLDGKKISKVDAASLKLGNL 247
| : : : : : : : : : : : : : : : : : : : : : : : : : : : : : :
QY 661 TALDI-----LSVSKNQLTNV--NLSPKNTVTYNDISHNHISL 697
| : : : : : : : : : : : : : : : : : : : : : : : : : : : : : :
Db 248 AKLGSPFNSISAVDNGSLANTPHLRHLHLDNNKLTLPVGGLA-EHKYIQVYVYLLHNNNISV 306
| : : : : : : : : : : : : : : : : : : : : : : : : : : : : : :

```

```

RESULT 13
US-08-190-802A-50
; Sequence 50, Application US/08190802A
; Patent No. 5519003
; GENERAL INFORMATION:
; APPLICANT: Mochly-Rosen, Daria
; APPLICANT: Ron, Dorit
; TITLE OF INVENTION: WD-40 - Derived Peptides and Uses
; TITLE OF INVENTION: The use of
; NUMBER OF SEQUENCES: 265
; CORRESPONDENCE ADDRESS:
; ADDRESSEE: Denlinger & Associates
; STREET: P.O. Box 60850
; CITY: Palo Alto
; STATE: CA
; COUNTRY: USA
; ZIP: 94306-0850
; COMPUTER READABLE FORM:
; MEDIUM TYPE: Floppy disk

```

```

; COMPUTER: IBM PC compatible
; OPERATING SYSTEM: PC-DOS/MS-DOS
; SOFTWARE: Patentin Release #1.0, Version #1.25
; CURRENT APPLICATION DATA:
; APPLICATION NUMBER: US/08/190,802A
; FILING DATE: 01-FEB-1994
; CLASSIFICATION: 530
; ATTORNEY/AGENT INFORMATION:
; NAME: Fadian, Gary R.
; REGISTRATION NUMBER: 33,875
; REFERENCE/DOCKET NUMBER: 8600-0139
; TELECOMMUNICATION INFORMATION:
; TELEPHONE: (415) 324-0880
; TELEFAX: (415) 324-0960
; INFORMATION FOR SEQ ID NO: 50:
; SEQUENCE CHARACTERISTICS:
; LENGTH: 603 amino acids
; TYPE: amino acid
; TOPOLOGY: unknown
; MOLECULE TYPE: protein
; HYPOTHETICAL: NO
; ANTI-SENSE: NO
; ORIGINAL SOURCE:
; INDIVIDUAL ISOLATE: Insulin-like growth factor bind.
; INDIVIDUAL ISOLATE: pro. complex-rat, Fig. 33
; US-08-190-802A-50

```

```

Query Match 3.8%; Score 153.5; DB 1; Length 603;
Best Local Similarity 23.3%; Pred. No. 0.00089;
Matches 104; Conservative 77; Mismatches 174; Indels 91; Gaps 20;

```

```

QY 296 LGIDPSTIKRVETQDQKLELYRPHHDHVAHMLSDIEIGKIDIPDPAHAELEKHKV 355
| : : : : : : : : : : : : : : : : : : : : : : : : : : : : : :
Db 103 LNKQSWMLSLSEFQ-ALLGLQNLNYIHLERNRLNLAV-----LFTHPSLASLSLS 154
| : : : : : : : : : : : : : : : : : : : : : : : : : : : : : :
QY 356 MDTLRALGFDEEYIIVRTHDAPPEPSNEKDPNNMKEMWATVIKLDGSRK---DPL 411
| : : : : : : : : : : : : : : : : : : : : : : : : : : : : : :
Db 155 SNLIGRL--EEGIFQGLSHLMDNLGNLSLVLPPTVEFGSLNLEHLYLAGNKLYLQPA 212
| : : : : : : : : : : : : : : : : : : : : : : : : : : : : : :
QY 412 QKKGSLPLNLETIGTFPIKIDISPVLOFKRLKQOLMK---TGVTYRFLDNMPQLEG 468
| : : : : : : : : : : : : : : : : : : : : : : : : : : : : : :
Db 213 LFCGLDELDELDSRNALRSVK-ANVFVHLPRLOKLYLDNRNLTIVAGAFI-GKALRW 270
| : : : : : : : : : : : : : : : : : : : : : : : : : : : : : :
QY 469 IDISQNNLKI--SFLSKKNTLVAAADNGIEDIR--LGOLPMLKFLVLSNNKISDLS 524
| : : : : : : : : : : : : : : : : : : : : : : : : : : : : : :
Db 271 LDIASHNRVAGIMEDTPFGLGLHVLRLAHNAIASLRPFKDLHLELDQGHNRIRQLG 330
| : : : : : : : : : : : : : : : : : : : : : : : : : : : : : :
QY 525 --PLASLHQLQELHIDNNQITD--LSPVSHKESLIVYVLSRNADVDLTLQ-----APK 574
| : : : : : : : : : : : : : : : : : : : : : : : : : : : : : :
Db 331 ERTFEGIGOLEVYLLDNDQITEVRGAFGLFNVAVMNLISGNC---LRLSPRVEQGLDK 387
| : : : : : : : : : : : : : : : : : : : : : : : : : : : : : :
QY 575 LFTLVNNDTKVSHLD-----FLKNNPNLSLSINRAQLOSLEGIEASSVIVR 621
| : : : : : : : : : : : : : : : : : : : : : : : : : : : : : :
Db 388 LMSLHLEHSCIGHVRLHTAGLSGLRLFLRD-----SISIEQSLAGL----- 433
| : : : : : : : : : : : : : : : : : : : : : : : : : : : : : :
QY 622 VEAEGNQIKSLVLDKQKSLFELDYTGNOQLTSL-----EGVNNFTALDLSVSKNQLTNV 676
| : : : : : : : : : : : : : : : : : : : : : : : : : : : : : :
Db 434 -----SELLELDLTNRTHLPRLQFLQGLGH---LEVLLSYNQLTTL 473
| : : : : : : : : : : : : : : : : : : : : : : : : : : : : : :
QY 677 N--LSKPNKTVYNDISHNHISLAD 699
| : : : : : : : : : : : : : : : : : : : : : : : : : : : : : :
Db 474 SAEVLGPRAFWLDISHNHLETLAE 499
| : : : : : : : : : : : : : : : : : : : : : : : : : : : : : :

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RESULT 14
US-08-477-346-50
; Sequence 50, Application US/08477346
; Patent No. 6262023
; GENERAL INFORMATION:
; APPLICANT: Mochly-Rosen, Daria
; APPLICANT: Ron, Dorit
; TITLE OF INVENTION: WD-40 - Derived Peptides and Uses

```

```

; TITLE OF INVENTION: Thereof
; NUMBER OF SEQUENCES: 265
; CORRESPONDENCE ADDRESS:
; ADDRESSEE: Morrison & Foerster
; STREET: 2000 Pennsylvania Avenue, NW
; CITY: Washington
; STATE: DC
; COUNTRY: USA
; ZIP: 20006-1812
; COMPUTER READABLE FORM:
; MEDIUM TYPE: Floppy disk
; OPERATING SYSTEM: IBM PC compatible
; SOFTWARE: PatentIn Release #1.0, Version #1.25
; CURRENT APPLICATION DATA:
; APPLICATION NUMBER: US/08/477,346
; FILING DATE: 07-JUN-1995
; CLASSIFICATION: 514
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: 08/487,072
; FILING DATE: 07-JUN-1995
; ATTORNEY/AGENT INFORMATION:
; NAME: MURASHIGE, KATE H.
; REGISTRATION NUMBER: 29,959
; REFERENCE/DOCKET NUMBER: 2550-0025.20
; TELECOMMUNICATION INFORMATION:
; TELEPHONE: (202) 887-1500
; TELEFAX: (202) 887-0763
; INFORMATION FOR SEQ ID NO: 50:
; SEQUENCE CHARACTERISTICS:
; LENGTH: 603 amino acids
; TYPE: amino acid
; TOPOLOGY: unknown
; MOLECULE TYPE: protein
; HYPOTHEICAL: NO
; ANTI-SENSE: NO
; ORIGINAL SOURCE:
; INDIVIDUAL ISOLATE: Insulin-like growth factor bind.
; INDIVIDUAL ISOLATE: pro. complex-rat, Fig. 33
; US-08-477-346-50

```

```

Query Match          3.8%; Score 153.5; DB 4; Length 603;
Best Local Similarity 23.3%; Pred. No. 0.00089;
Matches 104; Conservative 77; Mismatches 174; Indels 91; Gaps 20;

QY 296 LGIDPSTIKRYETODGKIGLEYPHHNAHVMLSDEIGKIDPPHAIENHARELEKHKVG 355
DB 103 LNLGOSWMLRSLPQ-ALLGQLNYLYLHERRRLRLNLAAG-----LFTHTPPLASLSLS 154
QY 356 MDTLRALGFEDEVILDIRTHADPTPPSNKEDPMNMKEMLATVIKIDLSRK----DPL 411
DB 155 SNLGRLL-EEGLFOGSLHMDLNLGMSNLVLDPTVFOGSLNHELVLAGNKLTYLQPA 212
QY 412 QRGKLSLPLNETLGIGTPTRKIDISPVLOEFKKLKQLMTK---TGVDYRFLDMPOLEG 468
DB 213 LFCGIGELREIDLNRNALRSYK-ANVEFVHLPRLOKLYLRLNLVAAPGAF-LGKMLRW 270
QY 469 IDISONNNKDI--SFLSKYKRLTVAAADNGIEDIRP-LGOLPNLFLVLSNKKISDLS 524
DB 271 LDLSHNRVAGIMETPFGGLGLHVLRLAHNAIASLRPRTRKDLHFLLELOLGNHRIQLG 330
QY 525 --PLASHOLOELHIDNNQITD--LSPVSHKESLTVVDLSRNDVDVATLQ-----APK 574
DB 331 ERTFEGIGQLLEVLTFLNNOITVEVAGFSLFNVAVMNLGNC--LRSLPERVFOGLDK 387
QY 575 LETLAVMDTVKSHLD-----FLKNNPNLSSLSINRAQLOSLGIEASSVIVR 621
DB 388 LHSJHLHSCIGHVRLTFAGLSGLRLFLRDN-----SISSIEQSLAGL-----433
QY 622 VEAGNQIKSLVKDKGSLTFDVTGNOLTSU-----EGVNNFTALDLSVSKNOLTV 676
DB 434 -----SELLEDDLTNRLTHLPRQLFOGLGH-----LEVLISYNQITL 473

```

```

QY 677 N--LSKPNKVTYNIDISHNNI-SLAD 699
DB 474 SAEVLGPIQRAFWLDISHNHLETLAE 499

```

```

RESULT 15
US-08-190-802A-49
; Sequence 49, Application US/08190802A
; Patent No. 5519003
; GENERAL INFORMATION:
; APPLICANT: Mochly-Rosen, Daria
; APPLICANT: Ron, Dorit
; TITLE OF INVENTION: WD-40 - Derived Peptides and Uses
; NUMBER OF SEQUENCES: 265
; CORRESPONDENCE ADDRESS:
; ADDRESSEE: Dehlinger & Associates
; STREET: P.O. Box 60850
; CITY: Palo Alto
; STATE: CA
; COUNTRY: USA
; ZIP: 94306-0850
; COMPUTER READABLE FORM:
; MEDIUM TYPE: Floppy disk
; OPERATING SYSTEM: IBM PC compatible
; SOFTWARE: PatentIn Release #1.0, Version #1.25
; CURRENT APPLICATION DATA:
; APPLICATION NUMBER: US/08/190,802A
; FILING DATE: 01-FEB-1994
; CLASSIFICATION: 530
; ATTORNEY/AGENT INFORMATION:
; NAME: Fabian, Gary R.
; REGISTRATION NUMBER: 33,875
; REFERENCE/DOCKET NUMBER: 8600-0139
; TELECOMMUNICATION INFORMATION:
; TELEPHONE: (415) 324-0880
; TELEFAX: (415) 324-0960
; INFORMATION FOR SEQ ID NO: 49:
; SEQUENCE CHARACTERISTICS:
; LENGTH: 605 amino acids
; TYPE: amino acid
; TOPOLOGY: unknown
; MOLECULE TYPE: protein
; HYPOTHEICAL: NO
; ANTI-SENSE: NO
; ORIGINAL SOURCE:
; INDIVIDUAL ISOLATE: Insulin-like growth factor binding
; INDIVIDUAL ISOLATE: protein complex, Fig. 32
; US-08-190-802A-49

```

```

Query Match          3.7%; Score 152.5; DB 1; Length 605;
Best Local Similarity 22.7%; Pred. No. 0.0011;
Matches 101; Conservative 62; Mismatches 151; Indels 131; Gaps 21;

QY 313 LGLEYPHHHNAHVMLSDEIGKIDPPHAIENHARELEKHKVMDTLRALGFEDEVILDI 372
DB 119 LGLENCHLHLENNQRLSLALGTFAHTP-----ALMSLGSNN--RL 158
QY 373 VRTHDAPTPPPSNKEDPMNMKEMLATVIKIDGSRKRPLOQRKLSLPLNETLGIGTPPI 432
DB 159 SRLDEG-----LFEGLSLMDLNLG-----WNSLAVLPDAFRGIG-----194
QY 433 KDISPVLOEFKKLKQLLM--TKGTGVTDYRFLDMMPOLEGIDISONNLKDISF-----L 482
DB 195 -----SLRELVLGNRLAYLOPALFSGLAELRELDLSRNALRAIKANVEYOLPR 244
QY 483 SK-YKNLLVAAADNG-----IEDIRPQLQPLNLFVLSNKKI 520
DB 245 OKLIYDRNLIAAVAGAFGLKALRWLDLSHNRVAGLLEDFPP--GILGLNVLRLSHNAI 302

```

Mon Dec 3 07:54:18 2001

us-09-645-835a-4.rai

Page 10

[illegible]

Search completed: December 3, 2001, 07:16:08
Job time: 137 sec

GenCore version 4.5
Copyright (c) 1993 - 2000 Compugen Ltd.

OM protein - protein search, using sw model

Run on: December 3, 2001, 07:22:19 ; Search time 370.05 Seconds
(without alignments)
594.256 Million cell updates/sec

Title: US-09-645-835a-4
Perfect score: 4080
Sequence: 1 MKTKKVIILVGLSSQLTL.....DHDHEDENAKDEQNHAD 792

Scoring table: BLOSUM62
Gapop 10.0 , Gapext 0.5

Searched: 3148936 seqs, 277657034 residues
Total number of hits satisfying chosen parameters: 3148936

Minimum DB seq length: 0
Maximum DB seq length: 2000000000

Post-processing: Minimum Match 0%
Maximum Match 100%
Listing first 45 summaries

Database : Pending_Patents_AA_Main:*

1:	/cgn2_6/ptodata/2/paa/PCRTUS_COMB.pep.*
2:	/cgn2_6/ptodata/2/paa/US06_COMB.pep.*
3:	/cgn2_6/ptodata/2/paa/US07_COMB.pep.*
4:	/cgn2_6/ptodata/2/paa/US08_COMB.pep.*
5:	/cgn2_6/ptodata/2/paa/US082_COMB.pep.*
6:	/cgn2_6/ptodata/2/paa/US083_COMB.pep.*
7:	/cgn2_6/ptodata/2/paa/US084_COMB.pep.*
8:	/cgn2_6/ptodata/2/paa/US085_COMB.pep.*
9:	/cgn2_6/ptodata/2/paa/US086_COMB.pep.*
10:	/cgn2_6/ptodata/2/paa/US087_COMB.pep.*
11:	/cgn2_6/ptodata/2/paa/US088_COMB.pep.*
12:	/cgn2_6/ptodata/2/paa/US089_COMB.pep.*
13:	/cgn2_6/ptodata/2/paa/US090_COMB.pep.*
14:	/cgn2_6/ptodata/2/paa/US091_COMB.pep.*
15:	/cgn2_6/ptodata/2/paa/US092_COMB.pep.*
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17:	/cgn2_6/ptodata/2/paa/US094_COMB.pep.*
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19:	/cgn2_6/ptodata/2/paa/US096_COMB.pep.*
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21:	/cgn2_6/ptodata/2/paa/US098_COMB.pep.*
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23:	/cgn2_6/ptodata/2/paa/US099_COMB.pep.*
24:	/cgn2_6/ptodata/2/paa/US099_COMB.pep.*

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

Result No.	Score	Query Match	Length	DB ID	Description
1	4080	100.0	792	1	Sequence 4, Appl
2	4080	100.0	792	20	Sequence 4, Appl
3	4080	100.0	792	20	Sequence 4, Appl
4	322.5	7.9	746	6	Sequence 2, Appl
5	297.5	7.3	1019	18	Sequence 86, Appl
6	293.5	7.2	1019	18	Sequence 85, Appl
7	292.5	7.2	1019	18	Sequence 84, Appl
8	292.5	7.2	1019	18	Sequence 87, Appl

1019	292.5	7.2	1019	18	US-09-471-255-88	Sequence 88, Appl
11	292.5	7.2	1019	18	US-09-471-255-89	Sequence 89, Appl
12	292.5	7.2	1039	19	US-09-471-255-2	Sequence 2, Appl
13	292.5	7.2	1039	19	US-09-583-110-5226	Sequence 5226, Ap
14	287	7.0	780	18	US-09-471-255-78	Sequence 78, Appl
15	248.5	6.1	489	18	US-09-471-255-56	Sequence 56, Appl
16	248.5	6.1	509	18	US-09-471-255-57	Sequence 57, Appl
17	248	6.1	732	15	US-09-134-000-6359	Sequence 6359, Ap
18	243.5	6.0	824	24	US-60-316-362-3396	Sequence 3396, Ap
19	243.5	6.0	824	24	US-09-471-255-83	Sequence 83, Appl
20	241	5.9	715	16	US-09-252-088-16	Sequence 16, Appl
21	241	5.9	715	16	US-09-252-088-15	Sequence 15, Appl
22	241	5.9	793	16	US-09-252-088B-15	Sequence 15, Appl
23	241	5.9	823	1	US-09-471-255-81	Sequence 81, Appl
24	238.5	5.8	823	1	PCT-US00-23417-2	Sequence 2, Appl
25	238.5	5.8	825	20	US-09-645-835a-2	Sequence 2, Appl
26	238.5	5.8	825	20	US-09-645-835a-2	Sequence 2, Appl
27	238.5	5.8	825	20	US-09-645-835a-2	Sequence 2, Appl
28	235	5.8	484	18	US-09-468-656-6	Sequence 8, Appl
29	235	5.8	484	18	US-09-471-255-8	Sequence 92, Appl
30	234.5	5.7	816	18	US-09-471-255-92	Sequence 182, App
31	233	5.7	447	21	US-09-536-784-182	Sequence 182, App
32	233	5.7	447	21	US-09-765-271-182	Sequence 182, App
33	233	5.7	447	21	US-09-765-272-182	Sequence 182, App
34	231	5.7	822	1	PCT-US00-23417-6	Sequence 6, Appl
35	231	5.7	822	20	US-09-645-835a-6	Sequence 6, Appl
36	231	5.7	822	20	US-09-645-835a-6	Sequence 6, Appl
37	230.5	5.6	811	18	US-09-471-255-96	Sequence 96, Appl
38	230.5	5.6	811	18	US-09-471-255-98	Sequence 98, Appl
39	230	5.6	431	24	US-60-191-637-11477	Sequence 11477, A
40	229.5	5.6	431	24	US-60-191-637-11477	Sequence 11477, A
41	229.5	5.6	816	18	US-09-471-255-93	Sequence 93, Appl
42	229.5	5.6	829	19	US-09-583-110-3851	Sequence 3851, Ap
43	228.5	5.6	811	18	US-09-471-255-97	Sequence 97, Appl
44	227.5	5.6	816	18	US-09-471-255-94	Sequence 94, Appl
45	226.5	5.6	834	18	US-09-471-255-95	Sequence 95, Appl

ALIGNMENTS

RESULT 1
PCT-US00-23417-4
Sequence 4, Application PC/TUS0023417
GENERAL INFORMATION:
APPLICANT: Heinrichs, Jon
APPLICANT: Johnson, Leslie S.
APPLICANT: Koenig, Scott
APPLICANT: Adamou, John E.
TITLE OF INVENTION: Pneumococcal Protein Homologs and Fragments for
TITLE OF INVENTION: Vaccines
FILE REFERENCE: 469201-402
CURRENT APPLICATION NUMBER: PCT/US00/23417
CURRENT FILING DATE: 2000-08-25
PRIOR APPLICATION NUMBER: U.S. 60/150,750
PRIOR FILING DATE: 1999-08-25
NUMBER OF SEQ ID NOS: 6
SOFTWARE: PatentIn Ver. 2.1
SEQ ID NO 4
LENGTH: 792
TYPE: PRT
ORGANISM: Streptococcus pyogenes
PCT-US00-23417-4

Query Match 100.0%; Score 4080; DB 1; Length 792;
Best Local Similarity 100.0%; Pred. No. 0;
Matches 792; Conservative 0; Mismatches 0; Indels 0; Gaps 0;
OY 1 MKTKKVIILVGLSSQLTLACOSRGNGTTPKTKOSRKGMTSNKIKPKSKTKNTKH 60
DB 1 MKTKKVIILVGLSSQLTLACOSRGNGTTPKTKOSRKGMTSNKIKPKSKTKNTKH 60

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OY 61 KGAVGVDPTDGFILTKDSKILSKTDGIVVDHGHSHFIFYADLKSGPFEYLIPKAS 120
DB 61 KGAVGVDPTDGFILTKDSKILSKTDGIVVDHGHSHFIFYADLKSGPFEYLIPKAS 120
OY 121 LAKPAVAQRAASOGTSKVADPHHHYEFNPADIVAEADALGYVRHDDHRYILKSSLSGQT 180
DB 121 LAKPAVAQRAASOGTSKVADPHHHYEFNPADIVAEADALGYVRHDDHRYILKSSLSGQT 180
OY 121 LAKPAVAQRAASOGTSKVADPHHHYEFNPADIVAEADALGYVRHDDHRYILKSSLSGQT 180
DB 121 LAKPAVAQRAASOGTSKVADPHHHYEFNPADIVAEADALGYVRHDDHRYILKSSLSGQT 180
OY 181 OQAKQVATRLPOTSSIVSTATANGIPGLHPTSDGFQFNQOGIVGYTKDSILVDHGH 240
DB 181 OQAKQVATRLPOTSSIVSTATANGIPGLHPTSDGFQFNQOGIVGYTKDSILVDHGH 240
OY 241 HPISEADLRQGGWAHVADQYDPAKKAEPKPAETHQTPPELSEREKEYOEKLAIVAEKLGIDP 300
DB 241 HPISEADLRQGGWAHVADQYDPAKKAEPKPAETHQTPPELSEREKEYOEKLAIVAEKLGIDP 300
OY 301 STIKRVEDGKLGLEYPHHDAHVLMDSIEIGKIDIPDPAHEARELEKHKVGMOTLR 360
DB 301 STIKRVEDGKLGLEYPHHDAHVLMDSIEIGKIDIPDPAHEARELEKHKVGMOTLR 360
OY 361 ALGFEDEVILDIIVRTHDAPTPEPSNEKDPNMKEMLATVIKLDGSKRDPLOKRGISLIP 420
DB 361 ALGFEDEVILDIIVRTHDAPTPEPSNEKDPNMKEMLATVIKLDGSKRDPLOKRGISLIP 420
OY 421 NLETIGIFTPKIDISPVLOPKKIKOLIMTKGTVDYRFLDNNPQLEGIDISQNNLKDIS 480
DB 421 NLETIGIFTPKIDISPVLOPKKIKOLIMTKGTVDYRFLDNNPQLEGIDISQNNLKDIS 480
OY 481 FLSTKKNLTVAADANGIEDIRPLGOLPMLKFLVLSNNKISDLSPLASLHQLQELHIDNN 540
DB 481 FLSTKKNLTVAADANGIEDIRPLGOLPMLKFLVLSNNKISDLSPLASLHQLQELHIDNN 540
OY 541 QITDLSPVSHKESLTIVVDLSRNADVLTALQAPKLETLVAVNDTKVSHDLEFLKNNPNLSSL 600
DB 541 QITDLSPVSHKESLTIVVDLSRNADVLTALQAPKLETLVAVNDTKVSHDLEFLKNNPNLSSL 600
OY 601 SINRAQLOSLEGIEASSVIVREAEAGNOIKSLVKDKQGSLEFLDVGNOQLTSLEGVNNF 660
DB 601 SINRAQLOSLEGIEASSVIVREAEAGNOIKSLVKDKQGSLEFLDVGNOQLTSLEGVNNF 660
OY 661 TALDIISVSKNQLTNVLSKPKNTVTNIDISHNNISLADLKLNQHIPEAIKKNPFAVYE 720
DB 661 TALDIISVSKNQLTNVLSKPKNTVTNIDISHNNISLADLKLNQHIPEAIKKNPFAVYE 720
OY 721 GSNVNGTAEEKAAMATKAKESAOESASHDYNNHHTYEDEEGHAHHRKDDHDEHED 780
DB 721 GSNVNGTAEEKAAMATKAKESAOESASHDYNNHHTYEDEEGHAHHRKDDHDEHED 780
OY 781 ENKAEQONHAD 792
DB 781 ENKAEQONHAD 792

```

RESULT 2

```

; Sequence 4, Application US/09645835
; GENERAL INFORMATION:
; APPLICANT: Heinrichs, Jon
; APPLICANT: Koenig, Scott
; APPLICANT: Adamou, John E.
; TITLE OF INVENTION: Pneumococcal Protein Homologs and Fragments for
; FILE REFERENCE: 469201-402
; CURRENT APPLICATION NUMBER: US/09/645,835
; PRIOR FILING DATE: 2000-08-25
; NUMBER OF SEQ ID NOS: 6
; SOFTWARE: PatentIn Ver. 2.1
; SEQ ID NO 4
; LENGTH: 792
; TYPE: PRT

```

ORGANISM: Streptococcus pyogenes
US-09-645-835-4

```

Query Match 100.0%; Score 4080; DB 20; Length 792;
Best Local Similarity 100.0%; Pred. No. 0;
Matches 792; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

OY 1 MKTKKVIILVGLLSQTLIACOSRNGNGTYPIKTKOSKRGTKSKIKPIKSKTKNTKH 60
DB 1 MKTKKVIILVGLLSQTLIACOSRNGNGTYPIKTKOSKRGTKSKIKPIKSKTKNTKH 60
OY 61 KGAVGVDPTDGFILTKDSKILSKTDGIVVDHGHSHFIFYADLKSGPFEYLIPKAS 120
DB 61 KGAVGVDPTDGFILTKDSKILSKTDGIVVDHGHSHFIFYADLKSGPFEYLIPKAS 120
OY 121 LAKPAVAQRAASOGTSKVADPHHHYEFNPADIVAEADALGYVRHDDHRYILKSSLSGQT 180
DB 121 LAKPAVAQRAASOGTSKVADPHHHYEFNPADIVAEADALGYVRHDDHRYILKSSLSGQT 180
OY 181 OQAKQVATRLPOTSSIVSTATANGIPGLHPTSDGFQFNQOGIVGYTKDSILVDHGH 240
DB 181 OQAKQVATRLPOTSSIVSTATANGIPGLHPTSDGFQFNQOGIVGYTKDSILVDHGH 240
OY 241 HPISEADLRQGGWAHVADQYDPAKKAEPKPAETHQTPPELSEREKEYOEKLAIVAEKLGIDP 300
DB 241 HPISEADLRQGGWAHVADQYDPAKKAEPKPAETHQTPPELSEREKEYOEKLAIVAEKLGIDP 300
OY 301 STIKRVEDGKLGLEYPHHDAHVLMDSIEIGKIDIPDPAHEARELEKHKVGMOTLR 360
DB 301 STIKRVEDGKLGLEYPHHDAHVLMDSIEIGKIDIPDPAHEARELEKHKVGMOTLR 360
OY 361 ALGFEDEVILDIIVRTHDAPTPEPSNEKDPNMKEMLATVIKLDGSKRDPLOKRGISLIP 420
DB 361 ALGFEDEVILDIIVRTHDAPTPEPSNEKDPNMKEMLATVIKLDGSKRDPLOKRGISLIP 420
OY 421 NLETIGIFTPKIDISPVLOPKKIKOLIMTKGTVDYRFLDNNPQLEGIDISQNNLKDIS 480
DB 421 NLETIGIFTPKIDISPVLOPKKIKOLIMTKGTVDYRFLDNNPQLEGIDISQNNLKDIS 480
OY 481 FLSTKKNLTVAADANGIEDIRPLGOLPMLKFLVLSNNKISDLSPLASLHQLQELHIDNN 540
DB 481 FLSTKKNLTVAADANGIEDIRPLGOLPMLKFLVLSNNKISDLSPLASLHQLQELHIDNN 540
OY 541 QITDLSPVSHKESLTIVVDLSRNADVLTALQAPKLETLVAVNDTKVSHDLEFLKNNPNLSSL 600
DB 541 QITDLSPVSHKESLTIVVDLSRNADVLTALQAPKLETLVAVNDTKVSHDLEFLKNNPNLSSL 600
OY 601 SINRAQLOSLEGIEASSVIVREAEAGNOIKSLVKDKQGSLEFLDVGNOQLTSLEGVNNF 660
DB 601 SINRAQLOSLEGIEASSVIVREAEAGNOIKSLVKDKQGSLEFLDVGNOQLTSLEGVNNF 660
OY 661 TALDIISVSKNQLTNVLSKPKNTVTNIDISHNNISLADLKLNQHIPEAIKKNPFAVYE 720
DB 661 TALDIISVSKNQLTNVLSKPKNTVTNIDISHNNISLADLKLNQHIPEAIKKNPFAVYE 720
OY 721 GSNVNGTAEEKAAMATKAKESAOESASHDYNNHHTYEDEEGHAHHRKDDHDEHED 780
DB 721 GSNVNGTAEEKAAMATKAKESAOESASHDYNNHHTYEDEEGHAHHRKDDHDEHED 780
OY 781 ENKAEQONHAD 792
DB 781 ENKAEQONHAD 792

```

RESULT 3

```

; Sequence 4, Application US/09645835A
; GENERAL INFORMATION:
; APPLICANT: Heinrichs, Jon
; APPLICANT: Koenig, Scott
; APPLICANT: Adamou, John E.

```


TITLE OF INVENTION: Pneumococcal Protein Homologs and Fragments for
 TITLE OF INVENTION: Vaccines
 FILE REFERENCE: 469201-493
 CURRENT APPLICATION NUMBER: US/09/645,835A
 CURRENT FILING DATE: 2000-08-25
 PRIOR APPLICATION NUMBER: U.S. 60/150,750
 PRIOR FILING DATE: 1999-08-25
 NUMBER OF SEQ ID NOS: 7
 SOFTWARE: PatentIn Ver. 2.1
 SEQ ID NO 4
 LENGTH: 792
 TYPE: PRT
 ORGANISM: Streptococcus pyogenes
 US-09-645-835A-4

Query Match 100.0%; Score 4080; DB 20; Length 792;
 Best Local Similarity 100.0%; Pred. No. 0;
 Matches 792; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 MTKKVIIVGLISLQTLACSGRGNGTPIKTKOSKGMTSNKIKPIKSKTKNTH 60
 DB 1 MTKKVIIVGLISLQTLACSGRGNGTPIKTKOSKGMTSNKIKPIKSKTKNTH 60
 QY 61 KGVAGVPTDGFILTKDSKILSKTDGIYVDHSHFTFYADLKSPREYLIPIKAS 120
 DB 61 KGVAGVPTDGFILTKDSKILSKTDGIYVDHSHFTFYADLKSPREYLIPIKAS 120
 QY 121 LAKPAVAQRAASGTSKVADPHHHHEFNADIVADALGYTRHDHFIYILKSLSGOT 180
 DB 121 LAKPAVAQRAASGTSKVADPHHHHEFNADIVADALGYTRHDHFIYILKSLSGOT 180
 QY 121 LAKPAVAQRAASGTSKVADPHHHHEFNADIVADALGYTRHDHFIYILKSLSGOT 180
 DB 121 LAKPAVAQRAASGTSKVADPHHHHEFNADIVADALGYTRHDHFIYILKSLSGOT 180
 QY 181 QAAKQVATRLPTSSLSVATANGIRGLHFTSDGFQFNGOGIYGVTKDSLIVHDGHL 240
 DB 181 QAAKQVATRLPTSSLSVATANGIRGLHFTSDGFQFNGOGIYGVTKDSLIVHDGHL 240
 QY 241 HPISFADLRGGMAHVAQYDPAKKAKEPETHQTEPESEKEVEKATLAETKSIDP 300
 DB 241 HPISFADLRGGMAHVAQYDPAKKAKEPETHQTEPESEKEVEKATLAETKSIDP 300
 QY 241 HPISFADLRGGMAHVAQYDPAKKAKEPETHQTEPESEKEVEKATLAETKSIDP 300
 DB 241 HPISFADLRGGMAHVAQYDPAKKAKEPETHQTEPESEKEVEKATLAETKSIDP 300
 QY 301 STIKRVETODKGLLEYRHHDAHVMILSDIEIGKIDIPRPHAEIENARELEKHKVGMOTLR 360
 DB 301 STIKRVETODKGLLEYRHHDAHVMILSDIEIGKIDIPRPHAEIENARELEKHKVGMOTLR 360
 QY 301 STIKRVETODKGLLEYRHHDAHVMILSDIEIGKIDIPRPHAEIENARELEKHKVGMOTLR 360
 DB 301 STIKRVETODKGLLEYRHHDAHVMILSDIEIGKIDIPRPHAEIENARELEKHKVGMOTLR 360
 QY 361 ALGDEEYILDIYTRHAPRPPESENEDPNNMKEMLATVTKLDGSRKDPLOKRGSLLP 420
 DB 361 ALGDEEYILDIYTRHAPRPPESENEDPNNMKEMLATVTKLDGSRKDPLOKRGSLLP 420
 QY 361 ALGDEEYILDIYTRHAPRPPESENEDPNNMKEMLATVTKLDGSRKDPLOKRGSLLP 420
 DB 361 ALGDEEYILDIYTRHAPRPPESENEDPNNMKEMLATVTKLDGSRKDPLOKRGSLLP 420
 QY 421 NIETGIGFTPIKIDISPILOPKKLOLMKTGVTDYRFLDNNPQLEGIDISONNLIKDIS 480
 DB 421 NIETGIGFTPIKIDISPILOPKKLOLMKTGVTDYRFLDNNPQLEGIDISONNLIKDIS 480
 QY 421 NIETGIGFTPIKIDISPILOPKKLOLMKTGVTDYRFLDNNPQLEGIDISONNLIKDIS 480
 DB 421 NIETGIGFTPIKIDISPILOPKKLOLMKTGVTDYRFLDNNPQLEGIDISONNLIKDIS 480
 QY 481 FLUSKYKNLTIVAADNGIEDIRPLGOLPULKETVLNKNKISDLSPLASLHQLDELHIDNN 540
 DB 481 FLUSKYKNLTIVAADNGIEDIRPLGOLPULKETVLNKNKISDLSPLASLHQLDELHIDNN 540
 QY 481 FLUSKYKNLTIVAADNGIEDIRPLGOLPULKETVLNKNKISDLSPLASLHQLDELHIDNN 540
 DB 481 FLUSKYKNLTIVAADNGIEDIRPLGOLPULKETVLNKNKISDLSPLASLHQLDELHIDNN 540
 QY 541 QITDLSVPSHKSSTLVVDLSRNADVDLATLQAPKLETLVNDTVSHLDLKNPNLSL 600
 DB 541 QITDLSVPSHKSSTLVVDLSRNADVDLATLQAPKLETLVNDTVSHLDLKNPNLSL 600
 QY 541 QITDLSVPSHKSSTLVVDLSRNADVDLATLQAPKLETLVNDTVSHLDLKNPNLSL 600
 DB 541 QITDLSVPSHKSSTLVVDLSRNADVDLATLQAPKLETLVNDTVSHLDLKNPNLSL 600
 QY 601 SINRAQLOSLIEGIEASSVIVREAGNOIKSLYLKDKOGSLTFIDVGNOLTSLEGVNF 660
 DB 601 SINRAQLOSLIEGIEASSVIVREAGNOIKSLYLKDKOGSLTFIDVGNOLTSLEGVNF 660
 QY 601 SINRAQLOSLIEGIEASSVIVREAGNOIKSLYLKDKOGSLTFIDVGNOLTSLEGVNF 660
 DB 601 SINRAQLOSLIEGIEASSVIVREAGNOIKSLYLKDKOGSLTFIDVGNOLTSLEGVNF 660
 QY 661 TALDITSVSKNOLTVNLSKPKTKVTNIDISNNISLADLKNEQHIEPAIAKNPAPAYE 720
 DB 661 TALDITSVSKNOLTVNLSKPKTKVTNIDISNNISLADLKNEQHIEPAIAKNPAPAYE 720
 QY 661 TALDITSVSKNOLTVNLSKPKTKVTNIDISNNISLADLKNEQHIEPAIAKNPAPAYE 720
 DB 661 TALDITSVSKNOLTVNLSKPKTKVTNIDISNNISLADLKNEQHIEPAIAKNPAPAYE 720
 QY 721 GSWNGTAEKKAAMATKAKESQAESHDYNNHNTYVDEGCHAHHRDDDDHHEHD 780
 DB 721 GSWNGTAEKKAAMATKAKESQAESHDYNNHNTYVDEGCHAHHRDDDDHHEHD 780
 QY 721 GSWNGTAEKKAAMATKAKESQAESHDYNNHNTYVDEGCHAHHRDDDDHHEHD 780
 DB 721 GSWNGTAEKKAAMATKAKESQAESHDYNNHNTYVDEGCHAHHRDDDDHHEHD 780
 QY 781 ENKAKDEQNHAD 792

DB 781 ENKAKDEQNHAD 792

RESULT 4
 US-08-293-246-2
 Sequence 2, Application US/08293246
 GENERAL INFORMATION:
 APPLICANT: Campbell, Priscilla
 APPLICANT: Potter, Terry
 APPLICANT: Sawyer, Richard
 APPLICANT: Drevets, Douglas
 APPLICANT: Freed, John
 TITLE OF INVENTION: INTERNALIN PRODUCTS AND PROCESSES
 NUMBER OF SEQUENCES: 6
 CORRESPONDENCE ADDRESS:
 ADDRESSEE: Sheridan Ross & McIntosh
 STREET: 1700 Lincoln Street, 35th Floor
 CITY: Denver
 STATE: Colorado
 COUNTRY: U.S.A.
 ZIP: 80203
 COMPUTER READABLE FORM:
 MEDIUM TYPE: Floppy disk
 COMPUTER: IBM PC compatible
 OPERATING SYSTEM: PC-DOS/MS-DOS
 SOFTWARE: PatentIn Release #1.0, Version #1.25
 CURRENT APPLICATION DATA:
 APPLICATION NUMBER: US/08/293,246
 FILING DATE:
 CLASSIFICATION: 435
 ATTORNEY/AGENT INFORMATION:
 NAME: Kovarik, Joseph E.
 REGISTRATION NUMBER: 33,005
 REFERENCE/DOCKET NUMBER: 2879-11
 TELECOMMUNICATION INFORMATION:
 TELEPHONE: 303/863-9700
 TELEFAX: 303/863-0223
 INFORMATION FOR SEQ ID NO: 2:
 SEQUENCE CHARACTERISTICS:
 LENGTH: 746 amino acids
 TYPE: amino acid
 TOPOLOGY: linear
 MOLECULE TYPE: protein
 US-08-293-246-2

Query Match 7.9%; Score 322.5; DB 6; Length 746;
 Best Local Similarity 30.6%; Pred. No. 2,2e-15;
 Matches 92; Conservative 66; Mismatches 136; Indels 7; Gaps 4;

QY 399 YIKIDIGSRK--DPIORGLSLPNETLIGFTPIKIDISPIVLOPKKLOLMKTGTGVD 456
 DB 2 IUKTVLGTNTVTDIVSQDDDDQVTTLOADRGL--IKSIDGLEVLNLTQINFSNNQDLD 58
 QY 457 YFELDNMPOLEGIDISONNLIKDISFLSKYKKNLTIVAADNGIEDIRPLGOLPULKETVLN 516
 DB 59 ITPKLDKRVKIDILNANNQIADIPPLANTMTGLTFNNQITDIDPLKMLNINLEIS 118
 QY 517 NKKIDSLASLHQLDELHIDNNQITDLSVPSHKSSTLVVDLSRNADVDLATLQAPK 575
 DB 119 SWTISDISLSGLTNLOQLSF--GNQYDPLKPLANTTLERLIDISSNKVSPISYLAKUTNL 177
 QY 576 ETLVNDTVSHLDLKNPNLSL SINRAQLOSLIEGIEASSVIVREAGNOIKSLYLK 635
 DB 178 ESLIATNNQISDITPLIGITNDELSTLNGNOLKIDIGTLASLTNLTDLANNQISNLAFL 237
 QY 636 DKOGSLTFIDVGNOLTSLEGVNFALDITSVSKNOLTVNLSKPKTKVTNIDISNNI 695
 DB 238 SGLTKLTELKAGNOLSNISPLAGLTALTNLDELNENQLEDISPISNKLNTLYTLTFNNI 297
 QY 696 S 696

Db 298 S 298

```

RESULT 5
US-09-471-255-86
; Sequence 86, Application US/09471255
; GENERAL INFORMATION:
; APPLICANT: BIOCHEM PHARMA INC.
; APPLICANT: HAMEL, Jos.e
; APPLICANT: BRODEUR, Bernard R.
; APPLICANT: PINEAU, Isabelle
; APPLICANT: MARTIN, Denis
; APPLICANT: RIOUX, Clément
; TITLE OF INVENTION: NOVEL STREPTOCOCCUS ANTIGENS
; FILE REFERENCE: 12806-11PCT
; CURRENT APPLICATION NUMBER: US/09/471,255
; CURRENT FILING DATE: 1999-12-23
; PRIOR APPLICATION NUMBER: US 60/113,800
; PRIOR FILING DATE: 1998-12-23
; NUMBER OF SEQ ID NOS: 102
; SOFTWARE: FASTSEQ for Windows Version 3.0
; SEQ ID NO 86
; LENGTH: 1019
; TYPE: PRT
; ORGANISM: S. pneumoniae
US-09-471-255-86

```

```

Query Match 7.3%; Score 297.5; DB 18; Length 1019;
Best Local Similarity 21.5%; Pred. No. 3,2e-13;
Matches 185; Conservative 114; Mismatches 286; Indels 277; Gaps 44;

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OY 16 SOLTLIACOSRNGTYPRTKQSRKGMTSNKIKPKSKTKNTKNGVAGVDEPT----- 70
DB 217 SOLTSSSTASDN-----TQSVAKGSTS---KPAKSEMILOSLEL-----YDSPAQRYS 265
OY 71 -DDGFLITKDSILSKTDOGIVVDHDSHFIFYADLKG--SFEFLIP---KGA--- 121
DB 266 ESDGLVF-DPAKILSRTPNGVAIPHDGHYFIPIYSKLSALEETIARWVPSGTSTVSTN 324
OY 122 AKP-----AVAQASAGTSGK-VADPHNHYEFPNADIAEDALGYTVRHDHFHYTL 172
DB 325 AKPHEVYSSIGSLSSNPSSLTLSKELSSASDGYIFNPKDIEETATAYIVRHGDHFHYIP 384
OY 173 KSSLGQTOAQAKOVATRLPOTSLVSTATANGIPGLHPTDGOFOFNOGQIVGTAKDSI 232
DB 385 KSNQIGPRLPNNSLAT--PSPSLPINPSTSH-----EKHEDDGIGFDPANNRIADESGF 437
OY 233 LVVDHDLHPISTADLRQSGMAHVADQYOPAKKAEPRAETHOT----- 275
DB 438 VMHGDHNIHFERRDLTE-----EOLKAOKHLEEVKTSNGIDSLSSHODYPS 487
OY 276 --BELSEREKEVOELAYLAELKIGIDPSTIKRVEPODOKLGLEYHNHDAHVMLSDIET 333
DB 488 NAKEMKDLDKIEEKIAGIMKOYGVKREST--VYNKEKNAILYPHGDH----- 533
OY 334 GNDIPRPAIEHARELEKK-VGMDTLRALGDEVEIIVRTHDAPRPSPNSE---KD 388
DB 534 -----HHADPIDEKHPVG-----IGHSHSNELFEPREGVAKKE 567
OY 389 PNMM--KEWLATVITKLDGSRKDPLOKRGSLRLPRLLETIGLGFPIIDISBVLQFKLKO 446
DB 568 GKRYVTGSELTVNVNL--LKNSTFNNOFNLANGOKRVSEFPELE-----KGLGI 617
OY 447 LAMTGTGYTVRFDL-----NMPOLEG-----IDISNNLKDIISFLS 483
DB 618 NMLVYLLITPDKVLEKVGKVGEGVGNIANFELDQPYLRGQGFYKITYIAKSDYPEVSYDG 677
OY 484 KYKNLTLVA-----AADNGIEDIRPLGOLP-NKELV-----LSNN 518
DB 678 TFLVPTSLATYMASQOTIFYPRHAGDYTLR-VNDQFAVPKCTDALVRVDFEFGHNAVLENN 736
OY 519 -KASDLS-PLASLHO-----LOELHIDNNQ--ITDLSPVSHKESLTVVDS 560

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DB 737 YKGEIKLPITPKLNOGTTTGTAGKIPVTEMANAYIDNOSTYIWEV-FILEKENG----- 790
OY 561 RNADVDTLATLOAPKLEFLMWNDTKVSHLDFLKNPNPLSLSTINRAQOLSGIEAASVIV 620
DB 791 -----DKPSILPQFKRKAQOENLKL-----EKVEPKTSE 821
OY 621 RVEAE-----GNQIKSLVLD-----KQSLTFLDYTG--NQLTSLGVNFTALD 664
DB 822 KVEKEKLESTGNSTNSLTLEEVPTVDPVOEKVAKFAESYGMKLEVLFLNMG----- 873
OY 665 ILSVSKNOLTNVLSKPNKTYNIDISHNNTSLADKLNEHIEPAIAKPNPAYEGSMV 724
DB 874 -----TEIYLPSCGV-----IKKN---MADE---TGADQNGEKNPS--ENGKV 911
OY 725 GNGTAEKAKAAMTKAKESAQEA 746
DB 912 STGTVENOPT-ENKPADSLPEA 932

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```

RESULT 6
US-09-471-255-85
; Sequence 85, Application US/09471255
; GENERAL INFORMATION:
; APPLICANT: BIOCHEM PHARMA INC.
; APPLICANT: HAMEL, Jos.e
; APPLICANT: BRODEUR, Bernard R.
; APPLICANT: PINEAU, Isabelle
; APPLICANT: MARTIN, Denis
; APPLICANT: RIOUX, Clément
; TITLE OF INVENTION: NOVEL STREPTOCOCCUS ANTIGENS
; FILE REFERENCE: 12806-11PCT
; CURRENT APPLICATION NUMBER: US/09/471,255
; CURRENT FILING DATE: 1999-12-23
; PRIOR APPLICATION NUMBER: US 60/113,800
; PRIOR FILING DATE: 1998-12-23
; NUMBER OF SEQ ID NOS: 102
; SOFTWARE: FASTSEQ for Windows Version 3.0
; SEQ ID NO 85
; LENGTH: 1019
; TYPE: PRT
; ORGANISM: S. pneumoniae
US-09-471-255-85

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```

Query Match 7.2%; Score 293.5; DB 18; Length 1019;
Best Local Similarity 21.6%; Pred. No. 6,5e-13;
Matches 188; Conservative 112; Mismatches 278; Indels 291; Gaps 46;

```

```

OY 16 SOLTLIACOSRNGTYPRTKQSRKGMTSNKIKPKSKTKNTKNGVAGVDEPT----- 70
DB 217 SOLTSSSTASDN-----TQSVAKGSTS---KPAKSEMILOSLEL-----YDSPAQRYS 265
OY 71 -DDGFLITKDSILSKTDOGIVVDHDSHFIFYADLKGSPFEFLIPK-----GASL- 121
DB 266 ESDGLVF-DPAKILSRTPNGVAIPHDGHYFIPIYSKL--SALEKIKARRPISGTSTVTS 322
OY 122 -AKP-----AVAQASAGTSGK-VADPHNHYEFPNADIAEDALGYTVRHDHFHY 170
DB 323 TNAXKNEVYSSIGSLSSNPSSLTLSKELSSASDGYIFNPKDIEETATAYIVRHGDHFHY 382
OY 171 ILSKSLGQTOAQAKOVATRLPOTSLVSTATANGIPGLHPTDGOFOFNOGQIVGT 228
DB 383 IPRSNQIGOPTLPPNNSLAT--PSPSLPIN-----PGISHKHEHEDGIGFDANNRIAD 433
OY 229 KDSILVDHDLHPISTADLRQSGMAHVADQYOPAKKAEPRAETHOT----- 275
DB 434 ESGFIMSHGNHNIHFERRDLTE-----EOLKAOKHLEEVKTSNGIDSLSSHQ 483
OY 276 --BELSEREKEVOELAYLAELKIGIDPSTIKRVEPODOKLGLEYHNHDAHVMLS 329
DB 484 DYPNAKEMKDLDKIEEKIAGIMKOYGVKREST--VYNKEKNAILYPHGDH----- 533

```

```
QY 330 DIEIGKIDPDPAIEHARELEKHK-VGMDTLRALGFDEEVLIDIVRTHADPTPPSNE-- 386
Db 534 -----HHADPIDEHKPVG-----IGHSHSNYELEKPEEGV 563
QY 387 --KODNNM--KEMLATYIKLDGSRKDPLOQRKGLSLPNELETIGFTPIKDIPVLOFK 442
Db 564 AKKEBNKVTYGBELTNVNL---LKNSTFNNOFTLANGOKRVSFSPPELE-----K 613
QY 443 KIKQIMTKTGVTYRFLD-----NMPLEG-----IDISONNLKDI 479
Db 614 KLGIMLVKLTTPGKYLEKVSKEVFGVGNIANFELDQYLPQGFYKTYIAKODPREV 673
QY 480 SFLSKYKMLTVA-----AANGIEDIRPLGOLP-NIKELV----- 514
Db 674 SYDGFYFPTSLAYKMASQITFYFPFHAGDTYLR-VNPOFAVPKGTALVRYFDEHGNAY 732
QY 515 LSNM-KISDLS-PLASLHO-----LOELHINNQ---ITDLSVSHKESITV 556
Db 733 LENNIKVEIKLPIKLNQGTTRAGNKIPVTEMANAYLDNOSTYIYEV-PILEKEKOT- 790
QY 557 VDLRNDVDLQAPKLETLAMVNDTKVSHLDFLKNNPN-TSSLSTINRAQLOSL-EGI 613
Db 791 -----DKPSILPQFKRKAQENSKLDEK 814
QY 614 EASSYIVVEAB-----GNQIKSLVLKD-----KQSLTFLDVTG---NOLTSLEGV 657
Db 815 EEPKTSEKVEKEKLESTGNSTNSLTLEVPVDPVOEKVAKFAESYGMKLENVLFNMDG- 873
QY 658 NNFTADLISVSKNQLTNVNLSPKTKVTNTIDISHNNISLADKLNEQHIEPATAKNPRA 717
Db 874 -----TIELYPSGEV---IKKN---MADF---TGEAPQNGENKPS 906
QY 718 YEGSMVNGTAEKAKAMATKAKESAQEA 746
Db 907 --ENGKYSTGTVENQPT-ENKPADSLPEA 932

RESULT 7
US-09-471-255-55
; Sequence 55, Application US/09471255
; GENERAL INFORMATION:
; APPLICANT: BIOCHEM PHARMA INC.
; APPLICANT: HAMEL, Jos,e
; APPLICANT: BRODEUR, Bernard R.
; APPLICANT: PINEAU, Isabelle
; APPLICANT: MARTIN, Denis
; APPLICANT: RIOUX, Cl,ment
; TITLE OF INVENTION: NOVEL STREPTOCOCCUS ANTIGENS
; FILE REFERENCE: 12806-11PCT
; CURRENT APPLICATION NUMBER: US/09/471,255
; PRIOR FILING DATE: 1999-12-23
; PRIOR APPLICATION NUMBER: US 60/113,800
; NUMBER OF SEQ ID NOS: 102
; SOFTWARE: FastSeq for Windows Version 3.0
; SEQ ID NO 55
; LENGTH: 1019
; TYPE: PRT
; ORGANISM: S. pneumoniae
; US-09-471-255-55
```

Query Match 7.2%; Score 292.5; DB 18; Length 1019;
Best Local Similarity 21.4%; Pred. No. 7.8e-13;
Matches 185; Conservative 114; Mismatches 283; Indels 283; Gaps 45;

```
QY 16 SOLTILACOSKNGTYPKTKOSRKGMTSNKIKPIKSKTKNKHKGAVGVDPT----- 70
Db 217 SOLSYSTASNN-----TOSVAKGSTS---KPAKSENQSLKEL- -YDSSAQRYS 265
QY 71 -DDGFLTKDSKLSKTFDQGIIVVDHDSHFIFADLKG--SPEYILP---KASL--- 121
Db 266 ESDGLVF-DPAKILISRTNGVAIPRGDHYHFIYSKLSALEEKIARMPVLSGTSTVSTN 324
```

```
QY 122 AKP-----AAVORAASQGTSK-VADPHHHYEFNPADIVAEDALGYTVRHHDFHYTL 172
Db 325 AKRNEYVSSLSGLSSNPSSTLTTSKELSSASDGYIFNPKOIVETATAYIVRHGDHHTYLR 384
QY 173 KSSLISGQTAQAKOVATRLPQISSLSVSTATANGIPOLHPTSDGFOFNGQIVGYTKDSI 232
Db 385 KSNQIGQPTLPNNLSLAT--PSPSLPINPGTSH-----EKHEEDGYGFADNRIAEDESGF 437
QY 233 LVDDHGLHPISFADLRGGGMHVVADQYDPKAKKPAETHOT----- 275
Db 438 VMSHGDHNNHFFKKDLTE-----EQIKAOHLEEVKTSNGLDLSLSHEDPYG 487
QY 276 --PELSEREKEVOEKLAYIAEKLIDPSTTKRYETDQKLGLEYPHHDAHVLMUSDIEI 333
Db 488 NAKEMKDDKIEKELIAGIKQYGVAKRESI---VNAKEMKALIIYPHGDH----- 533
QY 334 GKDIIDPAIEHARELEKHK-VGMDTLRALGFDEEVLIDIVRTHADPTPPSNE---KD 388
Db 534 -----HHADPIDEHKPVG-----IGHSHSNYELEKPEEGVAKKE 567
QY 389 PNMM--KEMLATYIKLDGSRKDPLOQRKGLSLPNELETIGFTPIKDIPVLOFKKLO 446
Db 568 GKNVYTGEEELTNVNL---LKNSTFNNOFTLANGOKRVSFSPPELE-----KKLGI 617
QY 447 LMTKTGVTYRFLD-----NMPLEG-----IDISONNLKDISFLS 483
Db 618 NMLVKLTTPGKYLEKVSKEVFGVGNIANFELDQYLPQGFYKTYIAKODPREVSYDG 677
QY 484 KYKMLTVA-----AANGIEDIRPLGOLP-NIKELV-----LSNM 518
Db 678 TTFVPTSLAYKMASQITFYFPFHAGDTYLR-VNPOFAVPKGTALVRYFDEHGNAYLENN 736
QY 519 -KISDLS-PLASLHO-----LOELHINNQ---ITDLSVSHKESITVVDLS 560
Db 737 YKVEIKLPIKLNQGTTRAGNKIPVTEMANAYLDNOSTYIYEV-PILEKEKOT----- 790
QY 561 RNADVDTLQAPKLETLAMVNDTKVSHLDFLKNNPN-TSSLSTINRAQLOSL-EGIAS 617
Db 791 -----DKPSILPQFKRKAQENSKLDEKVEERK 818
QY 618 VIYRVEAE-----GNQIKSLVLKD-----KQSLTFLDVTG---NOLTSLEGVNNFT 661
Db 819 TSEKVEKEKLESTGNSTNSLTLEVPVDPVOEKVAKFAESYGMKLENVLFNMDG----- 873
QY 662 ALDILSVSKNQLTNVNLSPKTKVTNTIDISHNNISLADKLNEQHIEPATAKNPRAVYEG 721
Db 874 -----TIELYPSGEV---IKKN---MADF---TGEAPQNGENKPS--EN 908
QY 722 SMVNGTAEKAKAMATKAKESAQEA 746
Db 909 GKYSTGTVENQPT-ENKPADSLPEA 932
```

```
RESULT 8
US-09-471-255-84
; Sequence 84, Application US/09471255
; GENERAL INFORMATION:
; APPLICANT: BIOCHEM PHARMA INC.
; APPLICANT: HAMEL, Jos,e
; APPLICANT: BRODEUR, Bernard R.
; APPLICANT: PINEAU, Isabelle
; APPLICANT: MARTIN, Denis
; APPLICANT: RIOUX, Cl,ment
; TITLE OF INVENTION: NOVEL STREPTOCOCCUS ANTIGENS
; FILE REFERENCE: 12806-11PCT
; CURRENT APPLICATION NUMBER: US/09/471,255
; PRIOR FILING DATE: 1999-12-23
; PRIOR APPLICATION NUMBER: US 60/113,800
; NUMBER OF SEQ ID NOS: 102
; SOFTWARE: FastSeq for Windows Version 3.0
; SEQ ID NO 84
```

```

; LENGTH: 1019
; TYPE: PRF
; ORGANISM: S. pneumoniae
US-09-471-255-84

```

Query Match	7.28;	Score 292.5;	DB 18;	Length 1019;
Best Local Similarity	21.48;	Pred. No. 7.8e-13;		
Matches 185;	Conservative 114;	Mismatches 283;	Indels 283;	Gaps 45;

OY	16	SOLTILAOOSGNGCYPRKTKTOSQKMTSNKIKPIKSKTKNTKHKVAGADPPT	70
Db	217	SOLSYSSASDMN-----TQSAVKGSTS---KRAKSENLOSLKEL--YDPSRAORYS	265
OY	71	-DDGFILTKDSKILSKTDQGIYVDHDSHSEIFYADLKG--SPEYLIIP---KGASL--	121
Db	266	ESDGLIVE-DPAKILSIRTPNGVAIPIHGHCHYHPIPSKYLEEKIARVARYISGTGSTVSN	334
OY	122	AKP-----AVNORASOGTSK-VADPHNHYEFNADIVAEALGATYRHDDHFIYL	172
Db	325	AKPNEVYSSLSLSSNPSLTTSSKELSSASDGYIFENKRDIVEETATYIVRHGDHFYIP	364
OY	173	KSSLSGOTQAQAKAVATRLPOTSSLSVSTATANGIPGLHFPTSDGFONGGOIGVTKDSI	232
Db	385	KSNQIGOPTLPPNLSLAT--PSPSLIPNPGTSH-----EKHEEDQGYDANRIIADESGE	437
OY	233	LYVDHGHLPISFADLNQGGAHAYADODYDPAKKAEKAEETHOT-----	275
Db	438	VMSHGDHNHYEFKKDLE-----EQJKAQKHLEEKYTSHNGDLSLSSHEODYS	487
OY	276	--PELSEREKEYOQKLAIVLAEKLDIDESTIKRYETOQKGLGLEYPHHDAHVALMSDIEI	333
Db	488	NAKEMKDLDKKIEEKIANGIMQYCKREST---VYNNEKANLIYPHGDH-----	533
OY	334	GKDIJDPRAIEHARELEKHK-VGMDTLRALGDFEEVLLDIYKTHDAFTPPSPNSE---KD	368
Db	534	-----HHADRIDENHKRVG-----IGHSHSNELYELKPREGVAKKE	567
OY	389	PNNM--KEMLATYVILKLDGSKRPDLQKRGSLRLNLETLGIGFEPKIDISPVLOQFKLKQ	446
Db	568	GKKYTTGEGELNNVNL--LKNSTFNNOONFTLANGOKRVSPFPELE-----KKLGCI	617
OY	447	LMRTKGTGYDVRFLD-----NMBOLES---IDISONNLKDISFLS	483
Db	618	NNVLKLTIPPDGKYLEKVSCKVEFGVGYGNIANFELDQYLPBGQTFKTYTASXDPEVSYDC	677
OY	484	KYKNIULTVA-----AADNGIEDIRPLGOLP-NIKFLY-----LSNN	518
Db	678	TTFVPTSLAYKMASOTIFYPRPHADTYLR-VNPPFAVPKGTDAIVRYEDEFHGNAYLENN	766
OY	519	-KISDLS-PLASLQHO-----LOELHIDNNQ--ITDLSVSKESLITVYDLS	560
Db	737	YKVEGIKPIPKLNGOITRTAGKNIPIYTFANAMAYLDNOSTYIYEV-PILEKENOT	790
OY	561	RNADVDLATLOAPKLETLMVNDTKVSHLDLKNPN--LSSLSINRAOGLSL--EGIEASS	617
Db	791	-----DKPSILPQFRRKAQENSKFDEKVEEPK	818
OY	618	VIVRYEAE-----GNOIKSLVLKD-----KQSLTFLDYTG--NOLTSLEGVNNFT	661
Db	819	TSEYKEKEKLESETONSINSTLEEVPYVDPOQEVAKFAESYGMKLENUVFLNMG-	873
OY	662	ALDILSVSKNOJTVNVLSPKPKYTNIDISHNNSIADLKLNQOHIPREALAKNFPAYEG	721
Db	874	-----TIEIYLPBGCEV-----IKKN--MADF--TGEARQNGENKPPS--EN	908
OY	722	SMVNGTAEKKAAMATAKESAOEA	746
Db	909	GKVSTGTIVENOPT--ENKPADSLPRA	932

```

1Sequence: 87, Application: US/09/41255
2GENERAL INFORMATION:
3APPLICANT: BIOCHEM PHARMA INC.
4APPLICANT: HAMEL, Jos,e
5APPLICANT: BRODEUR, Bernard R.
6APPLICANT: PINEAU, Isabelle
7APPLICANT: MARTIN, Denis
8APPLICANT: RIOUX, Cl,ment
9TITLE OF INVENTION: NOVEL STREPTOCOCCUS ANTIGENS
10FILE REFERENCE: 12806-11PCT
11CURRENT APPLICATION NUMBER: US/09/471,255
12CURRENT FILING DATE: 1999-12-23
13PRIOR APPLICATION NUMBER: US 60/113,800
14PRIOR FILING DATE: 1998-12-23
15NUMBER OF SEQ ID NOS: 102
16SOFTWARE: PastedSeq for Windows Version 3.0
17SEQ ID NO 87
18LENGTH: 1019
19TYPE: PRT
20ORGANISM: S. pneumoniae
21US-09-471-255-87

```

Query Match 7.2%; Score 292.5; DB 18; Length 1019;
Best Local Similarity 21.4%; Pred. No. 7.8e-13;
Matches 185; Conservative 114; Mismatches 283; Indels 283; Gaps 45.

[illegible]


```

01      QY      173 KSSLSGCTQAOAKOVATRLPQTSSLSVSTATANQIIPGHIHPTSSGFCFQNGQIVGTAKSI 232
02      Db      385 KSNQIGOPTLPNNLSAT--PSPSLPIIPGTSI-----EKHEEDGIGFDANRIIAEDSEGF 437
03      QY      233 LVHDGHLHPRLSPFDLPOGGMAHVADQYDPAKKAERPAETHQT----- 275
04      Db      438 VMSHGDNHHYFFKKDLIE-----EDIKAAQKHLBEVKISHNGDLSLSEHDYPS 487
05      QY      276 --PELSEREKEYOERKLAFLAEKLGIDPSTIKRVETODQKIGLEYPRHDAHVYLMISDIPI 333
06      Db      488 NAKEMKDLDDKKEIKKIEKIGIMQYGVKKRESI--VNVNKKNAIILYPPGDH----- 533
07      QY      334 GKQIDPDAIHAHAELEKKH--VGMDDLALAGPDEVEYLDIVRTHDAPFPSPSE--KD 388
08      Db      534 -----HHADPIDHKEFVG-----IGHSHSNWELFPREGVAKKE 567
09      QY      389 PNMM--KEMLATVYIKLDGSRKDPLOKGLSLPLNETTIGITFPPIKDISPLYQFKKLO 446
10      Db      568 GNKYVTGELNINYNVL--LKNSTFNNQNFLLANGCKRVSEFPEPELE-----KKLGI 617
11      QY      447 LLMRTGVTDFRFLD-----NMQLEG---IDISQNNLKDISPFS 483
12      Db      618 NMLVYLITPDPKVLIEKVSQKVFGEVGNIANFELDQYLLPQGFRTYITASKDYPEVSYDG 677
13      QY      484 KKKNTLVA-----AADNGIEDIRPLGQLP-NLKFYL-----LSNN 518
14      Db      678 TPTVTPTSLAYKMAQSOTIYFPHADQTYLR--VNPQFAVPKGDALVRVDFEFGHAYLENN 736
15      QY      519 -KISDLS-PLASLHO-----LOELHIDNNQ--IIDLSVSKESLITYVDSL 560
16      Db      737 YVGEIKRLPIPLKNGTTRTAGNKIPVTFMANAYLDNOSTIYEV-PILEKNOT----- 790
17      QY      561 RNADDVLAITLAPKLETLAMVDTKVSHLDFLKNPN--LSLSIRAOLOSU--EGLEASS 617
18      Db      791 -----DKPSILIPQKRNKAQENSKPPEKVEPK 818
19      QY      618 VIVRYEAE-----GNQIKSLVLDK-----KQGSFLAFIDVTG---NQLTSLIEGVNFT 661
20      Db      819 TSEKVEKEKLTSETGNSNSTLEEYVPDVAQVEKVAKEASGYGKMLNVLFFNMGG----- 873
21      QY      662 ALDILSVSNQLTNNLSKPKNTYVNIIDISHNNTSLADKLMEGHIEPALAKNPAVEYG 721
22      Db      874 -----TELVLIPGSEV---TKKN--MADF---TGDAFOGNGENKPS--EN 908
23      QY      722 SMVNGCTAEKKAAMATKAESAQEA 746
24      Db      909 GKVSCTGVENOPT-ENKRPADSLPEA 932
25
26      RESULT 12
27      US-09-471-255-2
28      : Sequence 2, Application US/094/1255
29      : GENERAL INFORMATION:
30      : APPLICANT: BIOCHEM PHARMA INC.
31      : APPLICANT: HAMEL, Jos,e
32      : APPLICANT: BRODEUR, Bernard R.
33      : APPLICANT: PINEAU, Isabelle
34      : APPLICANT: MARTIN, Denis
35      : APPLICANT: RIOUX, Cl,ment
36      : TITLE OF INVENTION: NOVEL STREPTOCOCCUS ANTIGENS
37      : FILE REFERENCE: 12806-11PCT
38      : CURRENT APPLICATION NUMBER: US/09/471,255
39      : CURRENT FILING DATE: 1999-12-23
40      : PRIOR APPLICATION NUMBER: US 60/113,800
41      : PRIOR FILING DATE: 1998-12-23
42      : NUMBER OF SEQ ID NOS: 102
43      : SOFTWARE: FASTED for Windows Version 3.0
44      : SEQ ID NO 2
45      : LENGTH: 1039
46      : TYPE: PRF
47      : ORGANISM: S. pneumoniae
48      US-09-471-255-2

```

```

Query Match      7.2%; Score 292.5; DB 18; Length 1039;
Best Local Similarity 21.4%; Pred. No. 8e-13;
Matches 185; Conservative 114; Mismatches 283; Indels 283; Gaps 45;

OY      16  SOLFLIACQSGNGCTGYPIKTKQSRKGMTSNKRIPIKRSKTKNTKHKGVAGVDFPT----- 70
DB      237  SOLSYSSASDNN-----TQSAKGGST--KPAKSENLQSLKEL--YDPSAQRY 285
OY      71  -DDGFILITKDSKILSKTDQGIIVDDHGHSHFYIYADLK--SPFELIP---KGAL---- 121
DB      286  ESDGILVF-DPAKILSRTPNGVAIPHGDIHYHPIYSKLSALEEKIARWVLSGTGSTVSTN 344
OY      122  AKP-----AVAGRAASQGTSK-VADPHHHFENFADIVADALGYTVRRDDHFHYIL 172
DB      345  AKPNEVWSSLSGLSSNPSLSLTTSKELSSASDGYTFNPKDVEETATAYIVRHGDHRYIL 404
OY      173  KSLISGQTOAQAKOVATRLPOTSSLSVSTATANGIPGLHFTPSGFGFQNGGIVGATKDSI 232
DB      405  KSNQIGQCTLPNNSLIAT--PSPSLPIINGTSH-----EKHEEDGEGFDANRIIAEDSGE 457
OY      233  LVYDHGHLHPISPADLRGGGAHAYADQYDPAKKAEPKAEHNOT----- 275
DB      458  VMSHDDHHMYFFKKDLAE-----EQTKAQKHLVEYKTSHNGDLSLSSHEDYRG 507
OY      276  --PELSEREKEYOEKIAYLAEKLGIDPSTIKRYETQDGKLGLEYPHHHAHVLMSDIEI 333
DB      508  NAKKKKDLDKIIEEKIAGIMKQGVKKRESI--VVKENKALIYPHGDH----- 553
OY      334  GKIDPDPHAIEHARELEKHK-VGMDTLRALGFDEEVLIDYRTHDATPTPPSNE--KD 368
DB      554  -----HHADPIDEKHPVG-----IGHSHSNYELKPREGVAKKE 567
OY      389  PAMM--KEMIAVTIKLDGSKRPDLQKGLSLLENLETIGIGFPIDISPVLOFKLKQ 446
DB      588  GKRYVTGGEELINVAVL--LKNSTPNQNFPLANGQKRVSRSPPELE-----KTLGI 637
OY      447  LLMITGVGVDFRFD-----NMPQEGS---IDISONLKDISFLS 483
DB      638  NMLVKLIPDGKVLKEKVGSGVGEVGNIANFELDQPLPQGTFRKYTIASKDYEVSYDG 697
OY      484  KTKNLTLVA-----AANGIEDIRPLGQLP-NLKFIY-----TSNN 518
DB      698  TETVPISLAVKMAQSOTIFYPEHAGDTYLR-VNPOFAVFKGTDALVRRPDEFHGALEYNN 756
OY      519  -KISDLS-PLASLHQ-----LOELHIDNQ--ITDLSPVSKESLTVYDLS 560
DB      757  YVGEKILPIPKLNGCTTRTAGNKIPVTFMANAYLDNOSTYIVEV-PILEKENGT----- 810
OY      561  RNADVADLATLQAPKLETTLMVNDTKVSHLDPLKNNPN-ISSISINRAQLQSL--EGIEASS 617
DB      811  -----DKPSILPOFKRKAKQNSKIDKEVEPK 838
OY      618  VIVRVRAE-----GNQIKSLVLKD-----KQSLTFPLDVTG--NOLSLSGVNNFT 661
DB      839  TSEKVEKEKLESTGNTSSTILEEVPYVDPOVEKAKAABESGAKMLEVLLNMGG----- 893
OY      662  ADDILSVSKNOLTNVLSKPNKTVTNIDISHNNISLADKLKNEOHIPALAKNFPAYEG 721
DB      894  -----TIELLYLPQGEV---TKKN---MADF---TGBAPOGNGENKPS--EN 928
OY      722  SMVNGSTAEKKAAMATKAKESAQEA 746
DB      929  GKYSTGTIVENOPT-ENKPADSLPEA 952

RESULT 13
US-09-583-110-5226
; Sequence 5226, Application US/09583110
; GENERAL INFORMATION:
; APPLICANT: Lynn Doucette-Stamm et al.
; TITLE OF INVENTION: Nucleic Acid and Amino Acid Sequences Relating to Streptococcus
; TITLE OF INVENTION: Pneumoniae for Diagnostics and Therapeutics

```

```

: FILE REFERENCE: PATH00-07A
: CURRENT APPLICATION NUMBER: US/09/583.110
: CURRENT FILING DATE: 2000-05-26
: PRIOR APPLICATION NUMBER: US 09/107,433
: PRIOR FILING DATE: 1998-06-30
: PRIOR APPLICATION NUMBER: US 60/085,131
: PRIOR FILING DATE: 1998-05-12
: PRIOR APPLICATION NUMBER: US 60/051,553
: PRIOR FILING DATE: 1997-07-02
: NUMBER OF SEQ ID NOS: 5322
: SEQ ID NO 5226
: LENGTH: 1039
: TYPE: PRF
: ORGANISM: Streptococcus pneumoniae
US-09-583-110-5226

```

```

Query Match          7.2%; Score 292.5; DB 19; Length 1039;
Best Local Similarity 21.4%; Pred. No. 86-13;
Matches 185; Conservative 114; Mismatches 283; Indels 283; Gaps 45;

```

```

QY 16 SOUTLIACOSRGNGTYPIKTKOSRKGMTSNKIKPKSKTKTKHKGAVGVDPPT----- 70
DB 237 SOLSYSSTASDNN-----TQSAKSTGTS--KPAKSENLOSILKEL--YDSPSAQRYS 285
QY 71 -DDGFLTKSKSLKSTDOGIYVDHDSHFIFYADLKG--SPREYLP---KGASL--- 121
DB 286 ESDGLVF--DPAKIISTRPNGVAIPHGDIHFIPYSKLSALEEKIARWVPISGTSIVSTN 344
QY 122 AKP-----AVAOAASQSTK--VADPHHHYEFNPADIYAEDELGTVNRHDFHITL 172
DB 345 AKFNEVYSSLSLSSNPSSLTTSKELSSASDGYIFNPDIYEETATAYIVRHGDHFHYIP 404
QY 173 KSSLGQTOAQAKOVATRLPOTSLSVSTANGIPGLHFPSTSGFQFNOGIVGTVKDSI 232
DB 405 KSNQIGQPTLPNNNSLAT--PSPSLPIMPOTSH---EKHEEDGYGFANRIIAEDSGF 457
QY 233 LVDDHGHLPISFADLRQGGMAHVAADQYDPAKKAEPETHQT----- 275
DB 458 VMSHGDHNYEFKKDLTE-----EQIKAAQKHLEEVKTSINGLSDLSHEDDYG 507
QY 276 --PELSEREKEVOEKLALAEKLGIDPSTIKRVETODGKLGLEYRPHDHAHVLMLSDIEI 333
DB 508 NAKEMKDLDKKEIEKIGIMKQYGVKRESI---VYVKEKNAIIVPHGDH----- 553
QY 334 GKDIPDPAIEHARELEKHK--VGMOTLRALGFDEEVLIDIVRTHDAPTPPSNE---KD 388
DB 554 -----HHAADPIDHKRPG-----IGHSHSNYELKRPREGVAKKE 587
QY 389 PNMM--KEMLATVTKLDGSKRPLOKRGISLRLNLETLGIGFTPIKIDISPVLOFKKIQ 446
DB 588 GKXYTGSELNIVNVL---LKNSTFNQNNQFTLANGOKRVFSFPPELE-----KKG 637
QY 447 LLMFTGVTGYRFLD-----NMPQLEG---IDISSONLIKDISFSL 483
DB 638 NMLVYKLIIRPDOKVLEKYGKVGCGVGNANFELDQYRLDGGQTFKYTKSKDYPEVSYDG 697
QY 484 KYKNULTVA-----AADNGIEDIRPLGOLP--NLKFLY-----LSNN 518
DB 698 TETVPTSLAYMASQITLFYRPHAGDTYLR--VNPQFAPVKTKDIALVAVPDEFHGNATLENN 756
QY 519 -KISDLS--PLASLHQ-----LOELHIDNNQ--ITDLSPVSHKESLIVVDS 560
DB 757 YKVEIKLPKILNOGITTAKGKIPVTGEMANAYLDNOSTYIYEV--PILEKENQT----- 810
QY 561 RNADVDLATIQAARLETILMVNDTKVSHLDPLKNNPN--LSLSLNRQLOSL---EGLEASS 617
DB 811 -----DKPSILQOFKRNKQOENSKIDEXVEERK 838
QY 618 VIVEVEAE-----GNQKSLVLDK-----KQSLTFLPDVYG---NOLTSLEGVNNFT 661
DB 839 TSEKVEKEKLESTGNSTNSITTEEVPTVPDQEKVAKFAESYGMKLENIYLFNMNG----- 893

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```

QY 662 ALDILSVSKNOLTVNLSKPNKVTNIDISHNNISLADLKLNQOHIPEALAKNFAVYEG 721
DB 894 -----TIELYPSGEV-----IKKN---MADF---TGEAPQNGENKPS--EN 928
QY 722 SMVNGTAEKAMATYAKESAOEA 746
DB 929 GKVSTGVENQPT--ENKPADSLPEA 952

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```

RESULT 14
US-09-471-255-78

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```

: Sequence 78, Application US/09471255
: GENERAL INFORMATION:
: APPLICANT: BIOCHEM PHARMA INC.
: APPLICANT: HAMEL, Jos,e
: APPLICANT: BRODEUR, Bernard R.
: APPLICANT: PINEAU, Isabelle
: APPLICANT: MARTIN, Denis
: APPLICANT: RIOUX, Cl,ment
: TITLE OF INVENTION: NOVEL STREPTOCOCCUS ANTIGENS
: FILE REFERENCE: 12806-11PCT
: CURRENT APPLICATION NUMBER: US/09/471,255
: CURRENT FILING DATE: 1999-12-23
: PRIOR APPLICATION NUMBER: US 60/113,800
: PRIOR FILING DATE: 1998-12-23
: NUMBER OF SEQ ID NOS: 102
: SOFTWARE: FastSeq for Windows Version 3.0
: SEQ ID NO 78
: LENGTH: 780
: TYPE: PRF
: ORGANISM: S. pneumoniae
US-09-471-255-78

```

```

Query Match          7.0%; Score 287; DB 18; Length 780;
Best Local Similarity 25.6%; Pred. No. 1,36-12;
Matches 123; Conservative 63; Mismatches 166; Indels 128; Gaps 23;

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```

QY 16 SOUTLIACOSRGNGTYPIKTKOSRKGMTSNKIKPKSKTKTKHKGAVGVDPPT----- 70
DB 217 SOLSYSSTASDNN-----TQSAKSTGTS--KPAKSENLOSILKEL--YDSPSAQRYS 265
QY 71 -DDGFLTKSKSLKSTDOGIYVDHDSHFIFYADLKG--SPREYLP---KGASL--- 121
DB 266 ESDGLVF--DPAKIISTRPNGVAIPHGDIHFIPYSKLSALEEKIARWVPISGTSIVSTN 324
QY 122 AKP-----AVAOAASQSTK--VADPHHHYEFNPADIYAEDELGTVNRHDFHITL 172
DB 325 AKFNEVYSSLSLSSNPSSLTTSKELSSASDGYIFNPDIYEETATAYIVRHGDHFHYIP 384
QY 173 KSSLGQTOAQAKOVATRLPOTSLSVSTANGIPGLHFPSTSGFQFNOGIVGTVKDSI 232
DB 385 KSNQIGQPTLPNNNSLAT--PSPSLPIMPOTSH---EKHEEDGYGFANRIIAEDSGF 437
QY 233 LVDDHGHLPISFADLRQGGMAHVAADQYDPAKKAEPETHQT----- 275
DB 438 VMSHGDHNYEFKKDLTE-----EQIKAAQKHLEEVKTSINGLSDLSHEDDYG 487
QY 276 --PELSEREKEVOEKLALAEKLGIDPSTIKRVETODGKLGLEYRPHDHAHVLMLSDIEI 333
DB 488 NAKEMKDLDKKEIEKIGIMKQYGVKRESI---VYVKEKNAIIVPHGDH----- 533
QY 334 GKDIPDPAIEHARELEKHK--VGMOTLRALGFDEEVLIDIVRTHDAPTPPSNE---KD 388
DB 534 -----HHAADPIDHKRPG-----IGHSHSNYELKRPREGVAKKE 567
QY 389 PNMM--KEMLATVTKLDGSR-----KDPLOKRGISLRLNLE--TLGIGFTPIKIDISP 437
DB 568 GKXYTGSELNIVNLLKNSTFNQNNFTLANGOKRVFSFPPELEKKGILNML--VKLTP 626

```

```

RESULT 15
US-09-471-255-56

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```

Db      2 SYELGRHQAQVKKESNRVSYIDGDAQGA--ENLTPDEVSKREGINAQVXIKITDGG 59
QY      81 YVTHSHGDHFYNGKVPYDAIIEELMTDPNPHFKOSDVINEILDGYIKVNGVYVL 140
        |||:|||||:|||||:|||||:|||||:|||||:|||||:|||||:|||||:
Db      60 YVTHSHGDHYNGKVPYDAIIEELMKDPNOLKDSIDVINEIKGVYIKVNGVYVL 119
QY      141 KPGSKRNITTKQOIAQVAKGKKEAKEKGLAQAHLSEKEVAANVEAKRGVTTDDG 200
        |||:|||||:|||||:|||||:|||||:|||||:|||||:|||||:
Db      120 KDAAHADNITKEIKQ-----KQERSHN-----HNSRAD-NAVAARAKGRTTDDG 168
QY      201 IFSPDTIIDLDGAYLVPHGNHYHYPKDLSPSELAQAQVWSOKGGRGARDPRPT 260
        |||:|||||:|||||:|||||:|||||:|||||:|||||:|||||:
Db      169 IFNADSIDETGDAYIVPHGDHYHYPKDLSELASSELAAAYNNGG--GSRSSSSSVN 226
QY      261 APCRRAKAPIDVYPPNPGCHOPDNGGYHAPRPNDASQKHQRDEFKGTFFELLDL 320
        |||:|||||:|||||:|||||:|||||:|||||:|||||:|||||:
Db      227 A-----NPAQRLSENNHNTVPR-----TYHON--OGNMISSLRELY 262
QY      321 RLDKYRHEVEDGLIEPPTQVYKSNAGVYVPHGDHYHYPGOLSPLEMLAD---RY 376
        |||:|||||:|||||:|||||:|||||:|||||:|||||:|||||:
Db      263 AKPLSEHNVSDGLIFDPADITSRTARGVAVPHGNHYHYPGOLSELEKRIKRIIPLRY 322
QY      377 LAG-----OTDNDSSGSDHKSPEDEVTHTFLGHRKAYGKGLDGKPYDTSD 423
        |||:|||||:|||||:|||||:|||||:|||||:|||||:|||||:
Db      323 RSNHWVPDSRPEQSPQSTPEPSPSPQAPAPNQA-----PSNPIDEK- 365
QY      424 AYVFSKESHSVDKSGVYAKHGHHYIGFGEYELDEVANMVKAGGADELVAALDQ 463
        |||:|||||:|||||:|||||:|||||:|||||:|||||:|||||:
Db      366 ---LVKRAVRV-----GDGY-----VFEEVNGVSRYTPAKDLASFTAAQIDS 404
QY      484 EQGKEKPLFDKRYKRYKTKDGKGVYIMPKDKGYAFYARQOLDLQIYAFQEOELMKDK 543
        |||:|||||:|||||:|||||:|||||:|||||:|||||:|||||:
Db      405 KLAQOESL--SHKIGAKTD-----LPSSDRFYKAKADL--LARIHODLLDKGR 451
QY      544 HYRYDIVDTGIEPRLAVDVSSLRNAGNATYDGGSFVPHIDHIVYPSWLTNRQIAT 603
        |||:|||||:|||||:|||||:|||||:|||||:|||||:|||||:
Db      452 QVDEALDNLLE-RLK-DVXS-----DKVKLV-----XDILA 481
QY      604 IKYVQNHVEVRPDVMSKRGHEEGSVYIPNTPLDKRAGMNMWQIHSAEVOKALAGRF 663
        |||:|||||:|||||:|||||:|||||:|||||:|||||:|||||:
Db      482 FLADIRHE-----RLGKPAQITTYDDELDIYAKLAGKY 515
QY      664 AADPYIFDPDLAKETFWYKDGFSIPRADGSLRTINKSDLSQAQWQAOELLAKKN 723
        |||:|||||:|||||:|||||:|||||:|||||:|||||:|||||:
Db      516 TTEGGYIFDPDLITSE-----GDAYVTPHMTS--HWIKKDSISEBRAAQAQYAKEG 568
QY      724 AGDATDTPDKPEKQOAKDSNENQPSER--SKEEKESDQFIDSLP----- 766
        |||:|||||:|||||:|||||:|||||:|||||:|||||:|||||:
Db      569 L-----TPPSTHODSGNTEAKGAELYNRVKRAKKVPLDRMPYMLQYTVVEVNGSLI 621
QY      767 -----DYGLDRA-----TLEDHIINQLAQKANIDPYLLFOP----- 797
        |||:|||||:|||||:|||||:|||||:|||||:|||||:|||||:
Db      622 IPHYDHNINIFEFMFDEGLYEAAPGYTLEDLAVY-----KYVEHNERHSHDNGF 673
QY      798 -----EGVOFYNNKNGELVY 811
        |||:|||||:|||||:|||||:|||||:|||||:|||||:|||||:
Db      674 GNASDHVQ-RMKNQCAQDT 690

```

```

RESULT 2
US-08-961-083-56
: Sequence 56, Application US/08961083
: Patent No. 6159469
: GENERAL INFORMATION:
: APPLICANT: Choi et. al.
: TITLE OF INVENTION: Streptococcus pneumoniae Antigens and Vaccines
: NUMBER OF SEQUENCES: 452
: CORRESPONDENCE ADDRESS:
: ADDRESSEE: Human Genome Sciences, Inc.
: STREET: 9410 Key West Avenue
: CITY: Rockville
: STATE: Maryland
: COUNTRY: USA

```

```

21P: 20850
COMPUTER READABLE FORM:
MEDIUM TYPE: Diskette, 3.50 inch, 1.4mb storage
COMPUTER: HP Vectra 486/33
OPERATING SYSTEM: MSDOS version 6.2
SOFTWARE: ASCII Text
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/961,083
FILING DATE:
CLASSIFICATION: 435
PRIOR APPLICATION DATA:
APPLICATION NUMBER:
FILING DATE:
ATTORNEY/AGENT INFORMATION:
NAME: Brookes, A. Anders
REGISTRATION NUMBER: 36,373
REFERENCE/DOCKET NUMBER: PB340P2
TELECOMMUNICATION INFORMATION:
TELEPHONE: (301) 309-8504
TELEFAX: (301) 309-8512
INFORMATION FOR SEQ ID NO: 56:
SEQUENCE CHARACTERISTICS:
LENGTH: 796 amino acids
TYPE: amino acid
STRANDEDNESS: single
TOPOLOGY: linear
MOLECULE TYPE: protein
US-08-961-083-56

Query Match      21.4%; Score 934; DB 4; Length 796;
Best Local Similarity 29.4%; Pred. No. 3,4e-69;
Matches 271; Conservative 99; Mismatches 235; Indels 318; Gaps 32;

QY      22 SYQLGKHHMGLATKDNQIAYIDDSKGKVAKPT-KTMDQISAEGISAQDIYVTTDGG 80
        |||:|||||:|||||:|||||:|||||:|||||:|||||:|||||:
Db      1 SYELGLYQARTVKEKNRSYSID--GKATQKTEMLETPDEVSKREGINAQVXIKITDGG 57
QY      81 YVTHSHGDHFYNGKVPYDAIIEELMTDPNPHFKOSDVINEILDGYIKVNGVYVL 140
        |||:|||||:|||||:|||||:|||||:|||||:|||||:|||||:
Db      58 YVTHSHGDHYNGKVPYDAIIEELMKDPNOLKDSIDVINEIKGVYIKVNGVYVL 117
QY      141 KPGSKRNITTKQOIAQVAKGKKEAKEKGLAQAHLSEKEVAANVEAKRGVTTDDG 200
        |||:|||||:|||||:|||||:|||||:|||||:|||||:|||||:
Db      118 KDAAHADNVRTEKEIKROKQESHQH-REGS-----TPRNDGAVALARSQGRYTTDDGY 169
QY      201 IFSPDTIIDLDGAYLVPHGNHYHYPKDLSPSELAQAQVWSQKQKRG--ARPSDRP 258
        |||:|||||:|||||:|||||:|||||:|||||:|||||:|||||:
Db      170 IFNADSIDETGDAYIVPHGDHYHYPKDLSELASSELAAEAFLS--GRGLNSNRTYRR 226
QY      259 TPAQGRRAKAP-IDVYPPNPGCHOPDNGGYHAPRPNDASQKHQRDEFKGTFFELL 317
        |||:|||||:|||||:|||||:|||||:|||||:|||||:|||||:
Db      227 QNSDNTSRINWVPSVS-NGTNTNTNSN-----NSNTNSQASQNSND-----IDSILK 272
QY      318 QLRHLDLKYRHEVEDGLIEPPTQVYKSNAGVYVPHGDHYHYPGOLSPLEMLAD--- 374
        |||:|||||:|||||:|||||:|||||:|||||:|||||:|||||:
Db      273 QLYKPLPSQRHVESDGLVDPADITSRTARGVAVPHGDHYHYPYSONSELEERLARIIP 332
QY      375 -RYLAG-----OTDNDSSGSDHKSPEDEVTHTFLGHRKAYGKGLDGKPYDTSD 423
        |||:|||||:|||||:|||||:|||||:|||||:|||||:|||||:
Db      333 LRTSRNHWVPDSRPEQSPQPTPEPSPQAPAPNKLIDNSSLVYQVAKVGEVYFBEK 392
QY      391 -----SKPSDKE-VTHFLGHR-----IKAY----- 410
        |||:|||||:|||||:|||||:|||||:|||||:|||||:|||||:
Db      393 GISRYVFAKDLPSFTVKNLESKLSKQESVSHLTAKENVAPRDQEFYKAYNLLTEAKH 452
QY      411 -----GKGLD-----GRP----- 418
        |||:|||||:|||||:|||||:|||||:|||||:|||||:|||||:
Db      453 ALFXNKGNSDFQALDKLERLNDESTNKEKLVDDLAFADITPBERLGRKNSOIEYTE 512
QY      419 -----YDSDAYVFSKESHSVDKSGVYAKHGHHYIGFGEYELDEVANM 467
        |||:|||||:|||||:|||||:|||||:|||||:|||||:|||||:
Db      513 DEVYRIQADKTYTSDGYIFDEHDITSDGDAYVTPHMGSHWIGKDSLDKEKVAQAQAY 572

```

[illegible]

```

RESULT 3
US-08-961-083-182
; Sequence 182, Application US/08961083
; Patent No. 6159469
; GENERAL INFORMATION:
; APPLICANT: Choi et. al.
; TITLE OF INVENTION: Streptococcus pneumoniae Antigenes and Vaccines
; NUMBER OF SEQUENCES: 452
; CORRESPONDENCE ADDRESS:
; ADDRESSEE: Human Genome Sciences, Inc.
; STREET: 9410 Key West Avenue
; CITY: Rockville
; STATE: Maryland
; COUNTRY: USA
; ZIP: 20850
; COMPUTER READABLE FORM:
; MEDIUM TYPE: Diskette, 3.5 inch, 1.4mb storage
; COMPUTER: HP Vectra 486/33
; OPERATING SYSTEM: MSDOS version 6.2
; SOFTWARE: ASCII text
; CURRENT APPLICATION DATA:
; APPLICATION NUMBER: US/08/961,083
; FILING DATE:
; CLASSIFICATION: 435
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER:
; FILING DATE:
; ATTORNEY/AGENT INFORMATION:
; NAME: Brookes, A. Anders
; REGISTRATION NUMBER: 36,373
; REFERENCE/DOCKET NUMBER: PB340P2
; TELECOMMUNICATION INFORMATION:
; TELEPHONE: (301) 309-8504
; TELEFAX: (301) 309-8512
; INFORMATION FOR SEQ ID NO: 182:
; SEQUENCE CHARACTERISTICS:
; LENGTH: 447 amino acids
; TYPE: amino acid
; STRANDEDNESS: single
; TOPOLOGY: linear
; MOLECULE TYPE: protein
; US-08-961-083-182

```

Qy	29	HMGLATKRO-NOIAIYIDDSKGVKAPKNTKMTDIOISAEIGISABOIVYKIPIDOGVYTHSHG	87
	1	: : : : : : : : :	
Db	4	HRSGENDKNRNVSYVDGSQSSQSKS--ENLIPDPDYQSKEGIOAEOIYKIKTDGCVYTHSHG	61
Qy	88	HYHFYNGKVPYDAIISBELMTDYNHFHKOSDYVNEILTDGVYIKVNGNYVYLKPGSKRR	147
Db	62	HYHYNGKVPYDAIFSEELIKELDKDPNYOLKADIVNEVKGIGIYIKVDGKYVYUCLKDAHAD	121
Qy	148	NIRTKQOIAEQVAVGCTKEAKKEKGLAOVAHLSKEEVAVNEKKRGRYTDGVIESTDI	207
Db	122	NVRTEIDELNRQKOEHVAD-NEKVNUNA-----VARSGRTTIDGVIENFAD1	169
Qy	208	IDDLGDALVYHGHNHYHYPKKDLSPELSALAAQVWSOKQGRGARP--DYRFTPAFGR	265
Db	170	IEDGNNAVIVPHGGHYHYPKSDLSASLSALAAKHNLA--GKNMQPSQLSYSTASDNNF	226
Qy	266	KAPIDPVPYNGQGHQDPNGSYHPAPRPANDASONKHORDEFKCTYKELLDOLHRLDK	325
Db	227	QSVAKGTSKRPAN-----KSENLSLKLKELYDPSA	257
Qy	326	YRHYVEDLIEPTPOVIKSNAGYVPHGDHYHIIIPRSOLSPLEMLADRYLAGQTDND	385
Db	258	QRYSESDBLVDPKAIISRTNGVAIPHGDHYHIIIPRSKLSALEEKLARWVPISGTSV	317
Qy	386	S-----GSDHSPS-----DKEVTHFLGHRIKAYGKGLDGKPYDTSDAVFSK	429
Db	318	STNAKPNEVVSLSLSPNSPSSLTTSKELS-----SASGYLEFP	357
Qy	430	ESIHSVDSGVTAKHGDFHHY1	451
Db	358	KDIYEETATATVYKRGHDFHHY1	379

```

RESULT 4
PCT-US93-07261-11
; Sequence 11, Application PC/TUS9307261
; GENERAL INFORMATION:
; TITLE OF INVENTION: P1EMP3 MALARIA ANTIGEN, ANALOGS, ANTIBODIES AND USES THEREO
; NUMBER OF SEQUENCES: 23
; CORRESPONDENCE ADDRESS:
; ADDRESSEE: John H. C. Blasdale
; STREET: One Giralda Farms
; CITY: Madison
; STATE: New Jersey
; COUNTRY: USA
; ZIP: 07940-1000
; COMPUTER READABLE FORM:
; MEDIUM TYPE: floppy disk
; COMPUTER: Apple Macintosh
; OPERATING SYSTEM: Macintosh 6.0.5
; SOFTWARE: Microsoft word 5.1a
; CURRENT APPLICATION DATA:
; APPLICATION NUMBER: PCT/US93/07261
; FILING DATE: 19930805
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: US 07/927,531
; FILING DATE: 07-AUG-1992
; ATTORNEY/AGENT INFORMATION:
; NAME: Blasdale, John H. C.
; REGISTRATION NUMBER: 31,895
; REFERENCE/DOCKET NUMBER: DX0288X
; TELECOMMUNICATION INFORMATION:
; TELEPHONE: 201-822-7398
; TELEFAX: 201-822-7039
; INFORMATION FOR SEQ ID NO: 11:
; SEQUENCE CHARACTERISTICS:
; LENGTH: 1588 amino acids
; TYPE: amino acid
; TOPOLOGY: linear
; MOLECULE TYPE: protein
;
PCT-US93-07261-11

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Db 387 -SKVNGKLTSTFNPFRKRRKMLKRRKQELHKKKKYKKYKLLLEKRENPGEPLNT 445
Qy 422 SDAYVFSKESHSYDKSGVTAKHODHPHYIGFGELEQYELDEVANWVK----- 469
Db 446 PEIHVIRPSD--MDK-GENKSAGHPFKYQPTKGLKEVESHSVSKDOLHEHPPTKLPY 502
Qy 470 AKGQADELVALLDOEGEKPLFTDKKYSKRVTDGKVGIMPRDGKDYFARYOLD--- 526
Db 503 EKGHVS- EYOLDHEPPKLEPEYEGHVSREYOLDNEVRDELPEYEGHVSREYOLDNEG 561
Qy 527 -LTOYAFAEQELML-KDKKHRYDVIDTGIETPLA--VDVSSLPMHAGNATYDGSSEFVI 582
Db 562 PSTLKEYQOTELAKGKDTLNKPHESVDEYDQTELAKGKDIINKP-HEVDYD----- 613
Qy 563 PAIDHIVVPSWLTNRQIATKYVMQHPVPPD-----VSKPGHEBSGVI 630
Db 614 -----QSELAKGKDTLNKPHESVDEYDQTELAKGKEVTNKP-HENLEBY- 656
Qy 631 PNVPLDRAGPMNQIHSABEYOKALAEGR-----FAAPDGYIPDRVLAKETPVW 684
Db 657 -NEDLAKGKEVTNKPHEVSDYDQSELAKGKDTLNKPHESVDEY--DQTELAK----- 707
Qy 685 KDGFSIPRADGSSLRITINKSDLSQAEWQAQELT--AKNAGDATDTDKPEEKQAQDKS 742
Db 708 ---GKEVTNKAARENLEBYNETDLA-----KKEVTNKAARENLEBYNETDLAKGKEVTNKA 759
Qy 743 NENQO---PSEASKESKSDPFIDSLPDYGLDRATLEPHINQLOAKANIDKYLIFDPEG 799
Db 760 HENLEBYNETDLAKGKEVTNKAARENLEBY-----NETDLAKGKEVTNKP--AHEN 806
Qy 800 VOEYN-----KNGELVYDITKLOOIN 821
Db 807 LEEYNETDLAKGKEVTNKAARENLEBYN 833

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```

RESULT 6
US-08-596-291-3
; Sequence 3, Application US/08596291
; Patent No. 5821075
; GENERAL INFORMATION:
; APPLICANT: GONEZ, LEONEL JORGE
; APPLICANT: SARAS, JAN
; APPLICANT: CLAESON-WELSH, LENA
; APPLICANT: HELDIN, CARL-HENRIK
; TITLE OF INVENTION: PRIMARY STRUCTURE AND FUNCTIONAL
; TITLE OF INVENTION: EXPRESSION OF NUCLEOTIDE SEQUENCES FOR NOVEL PROTEIN
; NUMBER OF SEQUENCES: 4
; CORRESPONDENCE ADDRESS:
; ADDRESSEE: WOLF, GREENFIELD & SACKS, P.C.
; STREET: 600 ATLANTIC AVENUE
; CITY: BOSTON
; STATE: MASSACHUSETTS
; COUNTRY: USA
; ZIP: 02210
; COMPUTER READABLE FORM:
; MEDIUM TYPE: Floppy disk
; COMPUTER: IBM PC compatible
; OPERATING SYSTEM: PC-DOS/MS-DOS
; SOFTWARE: Patent Release #1.0, Version #1.25
; CURRENT APPLICATION DATA:
; APPLICATION NUMBER: US/08/596,291
; FILING DATE: 09-AUG-1996
; CLASSIFICATION: 435
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: US 08/115,573
; FILING DATE: 01-SEP-1993
; ATTORNEY/AGENT INFORMATION:
; NAME: GATES, EDWARD R.
; REGISTRATION NUMBER: 31,616
; REFERENCE/DOCKET NUMBER: 10461/7000
; TELECOMMUNICATION INFORMATION:

```

```

; TELEPHONE: 617/720-3500
; TELEFAX: 617/720-2441
; TELEX: 92-1742 EZEKIEL
; INFORMATION FOR SEQ ID NO: 3:
; SEQUENCE CHARACTERISTICS:
; LENGTH: 2465 amino acids
; TYPE: amino acid
; TOPOLOGY: linear
; MOLECULE TYPE: protein
US-08-596-291-3

```

```

Query Match 3.1%; Score 135.5; DB 2; Length 2465;
Best Local Similarity 19.6%; Pred. No. 0.067;
Matches 172; Conservative 114; Mismatches 328; Indels 265; Gaps 44;

```

```

Qy 9 GSVAAIILATHISYQLGKHNKML---ATKDNQIATIDSKGVKAPKNTKMD-QISAE 64
Db 1422 GQVYHLLER--GQSPSKSHVPTPOCTLSDNA---GQGEKVKKTQYKDYSEVTE 1476
Qy 65 EGISAEQIVKTIIDGQVYVSHGHYHFNKGVYDAIISSELTMTDPNYHFQSDVINEI 124
Db 1477 ENTFEYKLFKNSSGLGFSFRED--NLIPQINASTYRVKRLPAGQPAESCKIDVDYI 1534
Qy 125 LDGVYVIRNGNYVYLLKPGSKRNIRT-----KQO 154
Db 1535 L-----KVNG--ASLKGLSQOEYISALRGTAPEVELLCRPPGYLPEIDTALLTPLOS 1586
Qy 155 IAEVANGTKEAKEGLAQVAHLSKEVAVNEAK-----RQGRYTT-----DDGYIFS 203
Db 1587 PAQVLPNSSKSDSQSPCEVSTSDENEMSKKQCKSPSRSDSTSDSGSGEDDLVTA 1646
Qy 204 PTDIIDLDGAYL-----VPHGNHYHPIPKRDLSPSELAAQAAYWSQKQGARPSDY 256
Db 1647 PANISNTWSALHQLTSLNNVSOAQSHKAPK--SQEDITCTMFYYPQKIPKPFEDS 1703
Qy 257 RPTPAPGRKRAPIPDVTNPGQGHQPNNGYHAPPPRPNASQNKHOREFKTKTELL 316
Db 1704 NPSPLP-----PDMA--PCQSYQPOS-----ESASSSMKYNHIIHISEPTROEMW 1747
Qy 317 DQHLRLDKYRVEEDLIFE-PTQVTKSN--AGYVVPBGDHYHIIIPRQSLPLEMELA 373
Db 1748 TPL-KNDLE-NHLEDFLEVELLITLIKSEKASIGFVTYGN-----QRI 1790
Qy 374 DRYLAGQTDNDSDGSDSKSPKDEVTHTFLGRITKAYGKGLDKPYDTSAYVFSKESHI 433
Db 1791 GCYVHDVYIDPAKSDGRKPKDRLI-----KVN 1818
Qy 434 SVDSKGYTAKGDFPHYITGSELQYELDEVANWVKAKGQADELVALLDOEGEKPLFD 493
Db 1819 DTDVYTNMT--HTD-----AVNLLRAASKTVRLVI-----GVPRITQ 1853
Qy 494 TKKYS-----RKVT-KDGKVGyimPKDKDVFYARYOLDLT--QIAFAEQLMKKKHY 545
Db 1854 NTNVAFPATGKILCKNKEELGFSLCGGHDSLYQVYVYISDINPRVAALBEONLQDLDTYH 1913
Qy 546 RYDIVDTGI---EPRLAIVSSLLPMHAGNATYDTGSSFVIPHIDHIVVPSWLTNRQIA 602
Db 1914 VNGVSTQGMTLEEVNRLDM-SLP-----SLVLK-----ATRNDRLP 1948
Qy 603 TIKYVMQHPVPRDWSKPGHEBSGVI--PNVPLDRAGPMNQIHSABEYOKALAEGR 661
Db 1949 VPPSSKRAVSAPKSTYKNGSYSVSGSQPALTPNDSFVY-----AGEELNE----- 1996
Qy 662 RFAAPDGYTF-----PDRVLAKETPVWKGFSIPRADGSSLRITINKSDLSQAEWQA 715
Db 1997 -ISYPRKGCSTYQIKGSPNLLLPKESYIQEDDIY-----DDSQAEVYOSLIDVDV--EEA 2049
Qy 716 QELAKKN-AGDA-----TTTD--KPEEQQAQDKSN-----ENQ 746
Db 2050 ONLNNENNAAGDSGPGTLKMNKGLSEKRTEDTDCDGSPLPEYFTEATKMGCEYCEEK 2109
Qy 747 QPSEA-----SKEKESDFTI-----DSLDPYGLDRATLED 777

```

Db 2110 VKSESLIOKPOEKKTDDELTWGNDELPT--IERTNHED 2145

RESULT 7
US-09-100-804-3
Sequence 3, Application US/09100804
Patent No. 6066472
GENERAL INFORMATION:
APPLICANT: GONZ, LEONEL JORGE
APPLICANT: SARAS, JAN
APPLICANT: CLAESON-WELSH, LENA
APPLICANT: HELDIN, CARL-HENRIK
TITLE OF INVENTION: PRIMARY STRUCTURE AND FUNCTIONAL
TITLE OF INVENTION: EXPRESSION OF NUCLEOTIDE SEQUENCES FOR NOVEL PROTEIN
NUMBER OF SEQUENCES: 34
CORRESPONDENCE ADDRESS:
ADDRESSEE: WOLF, GREENFIELD & SACKS, P.C.
STREET: 600 ATLANTIC AVENUE
CITY: BOSTON
STATE: MASSACHUSETTS
COUNTRY: USA
ZIP: 02210
COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
OPERATING SYSTEM: IBM PC compatible
SOFTWARE: Patent Release #1.0, Version #1.25
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/09/100,804
FILING DATE:
CLASSIFICATION:
PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 08/596,291
FILING DATE: 09-AUG-1996
APPLICATION NUMBER: US 08/115,573
FILING DATE: 01-SEP-1993
PRIOR APPLICATION DATA:
APPLICATION NUMBER: PCT/US94/09943
FILING DATE: 01-SEP-1994
ATTORNEY/AGENT INFORMATION:
NAME: GATES, EDWARD R.
REGISTRATION NUMBER: 31,616
REFERENCE/DOCKET NUMBER: L0461/7003
TELECOMMUNICATION INFORMATION:
TELEPHONE: 617-720-3500
TELEFAX: 617-720-2441
TELEX:
INFORMATION FOR SEQ ID NO: 3:
SEQUENCE CHARACTERISTICS:
LENGTH: 2465 amino acids
TYPE: amino acid
TOPOLOGY: linear
MOLECULE TYPE: protein
US-09-100-804-3

Query Match 3.1%; Score 135.5; DB 3; Length 2465;
Best Local Similarity 19.6%; Pred. No. 0.067;
Matches 172; Conservative 114; Mismatches 328; Indels 265; Gaps 44;

QY 9 GSAVALLLTHGSGYGLGHHKML---ATKNDQIAYIDTSKGVKAPKTNKTMQ-QISAE 64
Db 1422 GOVYHLLLEK--GQSPTSKEHVPVTPQCLISDQA---OGQPEKKVKTQVQKDYVSFVTE 1476

QY 65 EGISAEQIVVKTIDOGYVSHGDHYFYNGKYVYDAIIESELLMTDPNHFQSDVINET 124
Db 1477 ENTFEKKLTKNNSGGLGFSFSRED--NLPEQINASTIVRYKKLPAQOPAAESKIDVGVIT 1534

QY 125 LDGYIVKVGNNYVYLKPSKRRNIRT-----KQO 154
Db 1535 L-----KVGK---ASLKGLSQOEIVSALRGTAPEVFLLCRPPPGVLEIDTALLTPIGS 1586

QY 155 IAPQVAKGTKEAKKGLAQAVALHKEEVAANVEAK-----ROGRYTT--DDGYIFS 203
Db 1587 PAQVLPNSSKSDSPQPCVBOSTSSDENEMSDSKKCKCKSPSRSDYSDSGSGEDDLVTA 1646

QY 204 PTDIIDLDGDAVY-----VPHGNHYHYPKKDLSPSELAAQAYWQOKQGRGARPDY 256
Db 1647 PANISNTSWSSALHQTLSMNVSOAOSHHEAPK---SQEDTICTMFTYPOKTPNKPEFSDS 1703

QY 257 RPTPAPGRKKAPIPDYTPNPGQGHQPDNGGYHAPRPDASQNHQDEFKGTFFELL 316
Db 1704 NSPLP-----PDMA--PGSQOPQS-----ESASSSSMDKYHIIHHSPTROENW 1747

QY 317 DQHLRLDLRYHVEEDGLTFE--PTQYIKSN--AFQYVPHGHYHIIIRSQLSPLEMLA 373
Db 1748 TPL-KNDLE-NHLEDELEVEELLITLIRSEKASISGFTYTKGN-----ORI 1790

QY 374 DRYLAGQTDNDGSDHSPKSPDEYVTHFLGRIRKAYGKGLDGKPYDSDAYVFSKESIH 433
Db 1791 GCYVHVDTQDPKPSDGRKLPGRDLT-----KVN 1818

QY 434 SYDKSGVTAKHGDHFIYIGFLEQYELDEVANWYKAGQADELYALDQOGKEKPLFD 493
Db 1819 DTDVYTNMT--HTD-----AVNLRAASKTVRLVI-----GRVPRITQ 1853

QY 494 TKKVS-----RKVT-KDGKVGYIMPKDKQDYFARYQOLDT--QAFAPQELMLKDKKH 545
Db 1854 NNWVSFAFGHKLTCNKEELFSLCGHDSLQYVYISDINRSVYALTEGMLQLDLYHY 1913

QY 546 RYDIVDTGT--EPRLAVDVSLPMAAGNATYDTGSSFVPHIDHIVVPSWMLTRNOIA 602
Db 1914 VNGVSTQGTLEEVNRALDM--SLP-----SLVLR-----ATRDLP 1948

QY 603 TIKYVQHGHEVAPDVWSKRGHEESSVY--PVNTPLDKRAQPMNOIHSAEVQKALAE 661
Db 1949 VVPSSKRSASVAPKSTKNGSVGSCQPALTPNDSFTV-----AGEINE----- 1996

QY 662 RFAAPDGYTF-----DPRVLAKETFEWKDGSFSPRADGSLRTINKSLQSAEQMOA 715
Db 1997 -ISYKKGCSYTIQIKSGNLLPKRSTYIQEDDIY-----DQSQAEVYQSLDLYVD--EBA 2049

QY 716 QELAKKN-AGDA-----TDTD--KPEEQQADKSN-----ENQ 746
Db 2050 QNLLMENNNAAGSCGPGTLKMGKLSERTEDTDCDGSPLREYFTFATKMGCECYEEK 2109

QY 747 QPSEA-----SKKESQDFI-----DSLDPDYLDRATITLED 777
Db 2110 VKSESLIOKPOEKKTDDELTWGNDELPT--IERTNHED 2145

RESULT 8
US-08-296-791-3
Sequence 3, Application US/08296791
Patent No. 6245337
GENERAL INFORMATION:
APPLICANT: St. Geme III, Joseph W.
APPLICANT: Falkow, Stanley
TITLE OF INVENTION: Haemophilus Adherence and Penetration
TITLE OF INVENTION: Protein
NUMBER OF SEQUENCES: 9
CORRESPONDENCE ADDRESS:
ADDRESSEE: Flehr, Hohbach, Test, Albritton & Herbert
STREET: 4 Embarcadero Center, Suite 3400
CITY: San Francisco
STATE: California
COUNTRY: United States
ZIP: 94111-4187
COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
OPERATING SYSTEM: IBM PC compatible
SOFTWARE: Patent Release #1.0, Version #1.25
CURRENT APPLICATION DATA:

APPLICATION NUMBER: US/08/296,791
 FILING DATE: 25-AUG-1994
 CLASSIFICATION: 435
 ATTORNEY/AGENT INFORMATION:
 NAME: Trecartin, Richard F.
 REGISTRATION NUMBER: 31,801
 REFERENCE/DOCKET NUMBER: A-59941/RFT/RMS
 TELECOMMUNICATION INFORMATION:
 TELEPHONE: (415) 781-1989
 TELEFAX: (415) 398-3249
 TELE: 910 277299
 INFORMATION FOR SEQ ID NO: 3:
 SEQUENCE CHARACTERISTICS:
 LENGTH: 1541 amino acids
 TYPE: amino acid
 TOPOLOGY: unknown
 US-08-296-791-3

Query Match 3.0% Score 133; DB 4; Length 1541;
 Best Local Similarity 18.0%; Pred. No. 0.051;
 Matches 155; Conservative 108; Mismatches 305; Indels 292; Gaps 37;

44 DSKGVKA-----PTNKTMDQISAEGISAQIVYKTTDQGYTSHGDHYHYNGK 95
 462 DKGSLKVGDDGVILLKQOTNGSGHAFASVIGSGRSTLVINDKQVDPNSIYGFGRGR 521
 96 -----VPYDAI-----ISEELMTDPN-----YHFKQSDVIN- 122
 522 LDNGNSLTFHDHIRMIDGARGLVNHNMTNASNITTTGSLITDPTTTPYIDAPDEDNP 581
 123 -----ELDGS-----YVIVKNGVNYVYLKPGSKRKN-----RTKQOIAEOVA 160
 582 YAFRRIKDGGQLYLNDENTYALRKGA STSELKNGSENMWLYGKTSDEAKRNV 641
 161 K-----GTRKAEKGLAOVAHLKKEEVAAVNEAKRQGRYTTDGGYTFSTPD 206
 642 NHIINRMNGFNGYGESEKNGNMLNTYFKGKSE-----QNRFLITG-----TN 687
 207 IIDL-----GDAVL-----VPHGNHNYT-----PKD-----LSPSELAQAQVWSQCGKARPS 254
 688 LNDLIVKGTGFLSGRPTPHARDIAGISSTKDPHFAENNEVVEDWIMN----- 739
 255 DYRPTAPRRKAPIDVTPNGGQHPDNGGYHAPRPAPNDASONKHQ----- 303
 740 -----NFKATTMNT-----GNASLYSGRNVANITNTASKKQVHIGYTGDTV 785
 304 --RDEKGR--TFKELLDQHLRLDLKYRNVEDGLIEEPTQV-----KS 344
 786 CVASDVTGYVCTTDLKSKALN-----SENPMLRGVNLTESANFVLGRA 832
 345 NAFGYVPPGQ-----HYHIIIPRSQLSPELMELRAGQTDNDSDSHSKPSD 395
 833 NLEGTIQSRKNSOVRLTENSJHMLTNSDVH--QDLPLANGHILHNSADSN----- 881
 396 KEVTHFLGRIKAYGKLDGKPYDSDAYVFSKESIHVSVDKGYTAKGHDHFHYTGE 455
 882 -NT-----KYNTL-----TVNSLSGNG-----SPYUL--TD 905
 456 LEQYELDEVANWYKAGQADELVAALDQEG--KEKPLFTKYSKRYTADKGYGYIMPRD 514
 906 LSKKQKGVVVTSGATGNFTLOVADKTGEPNHNELTFLASKAQRDLHNLVSLGNTVDIG 965
 515 GKDY-----FYARQOLDLTOIAFAEOELMLDKHYRDIYDTGIEPRLAADVSLPMHAG 570
 966 AMKTKLRNVKRTDLNPEV-----EKNQVDTNTITNTNNIQAADVSPV----- 1011
 571 NATYDGSSEVFIHIDHIVVYVSWLTRNQIATIKYVMQHPYEVPRVWSKPGHEESGAYI 630
 1012 -----SNNEIARVDEAPVPAPAPAT-----PSETTEVVENSKQESKTYE 1052
 631 PNYTPDLKRGMRWQIHSAEVQKALAGRFAPADGYTFEDPRDLAKETFWMKGSFS 690

DB 1053 KNEQDATETTAQ--NREVAKEAKSNVAKNTQTNVAOSG--SETKETQTTET----- 1100
 QY 691 IPRADGSLRTINKSPLSOAEHQOELLAKKNAGATPTDPEEKO-----QADKSNE 744
 DB 1101 -----KETATYKEKEKAVETKEQTEV-----PKVYSQVSPKQBSQSTVPOPAEPARE 1148
 QY 745 NQPSSEASKEKESDDFIDS 764
 DB 1149 NDPTVNIKEPQSQNTTADT 1168

RESULT 9
 PCT-US95-10661A-3
 Sequence 3, Application PC/TUS9510661A
 GENERAL INFORMATION:
 APPLICANT: Washington University, et al.
 TITLE OF INVENTION: Haemophilus adherence and Penetration protein
 NUMBER OF SEQUENCES: 9
 CORRESPONDENCE ADDRESSES:
 ADDRESS: Flehr, Hobach, Test, Albritton & Herbert
 STREET: 4 Embarcadero Center, Suite 3400
 CITY: San Francisco
 STATE: California
 COUNTRY: United States
 ZIP: 94111-4187
 COMPUTER READABLE FORM:
 MEDIUM TYPE: Floppy disk
 OPERATING SYSTEM: IBM PC compatible
 SOFTWARE: Patent in Release #1.0, Version #1.25
 CURRENT APPLICATION DATA:
 APPLICATION NUMBER: PCT/US95/10661A
 FILING DATE: 16-AUG-1995
 CLASSIFICATION:
 PRIOR APPLICATION DATA:
 APPLICATION NUMBER: US 08/296,791
 FILING DATE: 25-AUG-1994
 CLASSIFICATION:
 ATTORNEY/AGENT INFORMATION:
 NAME: Trecartin, Richard F.
 REGISTRATION NUMBER: 31,801
 REFERENCE/DOCKET NUMBER: FP-59941/RFT
 TELEPHONE: (415) 781-1989
 TELEFAX: (415) 398-3249
 TELE: 910 277299
 INFORMATION FOR SEQ ID NO: 3:
 SEQUENCE CHARACTERISTICS:
 LENGTH: 1541 amino acids
 TYPE: amino acid
 TOPOLOGY: unknown
 PCT-US95-10661A-3

Query Match 3.0% Score 133; DB 5; Length 1541;
 Best Local Similarity 18.0%; Pred. No. 0.051;
 Matches 155; Conservative 108; Mismatches 305; Indels 292; Gaps 37;

44 DSKGVKA-----PTNKTMDQISAEGISAQIVYKTTDQGYTSHGDHYHYNGK 95
 462 DKGSLKVGDDGVILLKQOTNGSGHAFASVIGSGRSTLVINDKQVDPNSIYGFGRGR 521
 96 -----VPYDAI-----ISEELMTDPN-----YHFKQSDVIN- 122
 522 LDNGNSLTFHDHIRMIDGARGLVNHNMTNASNITTTGSLITDPTTTPYIDAPDEDNP 581
 123 -----ELDGS-----YVIVKNGVNYVYLKPGSKRKN-----RTKQOIAEOVA 160
 582 YAFRRIKDGGQLYLNDENTYALRKGA STSELKNGSENMWLYGKTSDEAKRNV 641
 161 K-----GTRKAEKGLAOVAHLKKEEVAAVNEAKRQGRYTTDGGYTFSTPD 206
 642 NHIINRMNGFNGYGESEKNGNMLNTYFKGKSE-----QNRFLITG-----TN 687


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MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patent Release #1.0, Version #1.25
CURRENT APPLICATION DATA:
APPLICATION NUMBER: PCT/US95/10661A
FILING DATE: 16-AUG-1995
CLASSIFICATION:
PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 08/296,791
FILING DATE: 25-AUG-1994
CLASSIFICATION:
ATTORNEY/AGENT INFORMATION:
NAME: Treccartin, Richard F.
REGISTRATION NUMBER: 31,801
REFERENCE/DOCKET NUMBER: FP-59941/RFT
TELECOMMUNICATION INFORMATION:
TELEPHONE: (415) 781-1989
TELEFAX: (415) 398-3249
TELEX: 910 272799
INFORMATION FOR SEQ ID NO: 6:
SEQUENCE CHARACTERISTICS:
LENGTH: 1848 amino acids
TYPE: amino acid
TOPOLOGY: unknown
PCT-US95-10661A-6

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Query Match      3.0%; Score 130.5; DB 5; Length 1848;
Best Local Similarity 17.2%; Pred. No. 0.11;
Matches 159; Conservative 120; Mismatches 327; Indels 319; Gaps 39;

QY 48 KVAKPKTKTKMDQISAEGISAQIVYKINDQGYVYSHGHYFYNGK-----VPYDA 100
DB 487 KQKADANKK--QAFSGVIGSGRSTLYLWDDQVDPNSITFGFGRGRIDLNGSLTFPDH 544
QY 101 I-----ISELLMTDPN-----YHKQSDVINELLDGYTKV----- 132
DB 545 IRNIDGQARVYVNHMTNTSMITIGESLLTNPTITSYNLEAD-----DHPRLIRSI 598
QY 133 -----NGNYVYLKPGSKKNI-----RTKQQLAEQVAKGTKEAK 167
DB 599 PYRQLYPNQDNRSYTLKKGASTRSELPNQSGSENNMLYMGRTSDAKRNNMHNINER 658
QY 168 EKLQAVNHLKSEVAANVEAK-----RQGRYTTDDGYIFSPDTIIDL-----GDA 214
DB 659 MNGFN--GYFGEETKATQNGKLNVTFNKSDQNRFLTLGG-----TUNGLDINVEKGT 711
QY 215 YL-----VPGNHNHYI--PKKD--LSPSELAQAQVNSQKQRCARPSDYRPTAPGRK 266
DB 712 FLGSRPTPHARDIAGISSTKKPHFTENNEVYVEDWIR-----NFK 754
QY 267 APIPDVTPRGGGHPDNGGYHAPRPENDASQNKHOREDFKGTFFKELLDOHLRLDKY 326
DB 755 ATTMNVTGNASL-----YSGNNVANNITSNITASNAAQ 786
QY 327 RHEVDGLFEFTQYIKSNAGYVYPHGDHYHIIIPRSQLSLELELDRLAAGQTDND 386
DB 787 VHI--GYKTGDTGVCRSDYGYTCHNSNLSEKALNSEFTN-----LRGNVLNLEN 836
QY 387 GSDHKPRDKDEVTHTFGLGRITKAYGKGLDGKPYDTSDAYVESKESIHSVSKGVTAKHD 446
DB 837 AS-----FTLGKANLFG--TIQSTISTSOVNLKENS 864
QY 447 HFHYIGFGELEQYELDEVANVMVAKGQADLVLAALDOEGEKERPLFDTKKVSRYTKDK 506
DB 865 HMHLTGNNSNVQMLTNGHILNKNQDANKVT-----YNTLVN----- 904
QY 507 VGYIMPKDGDYFYARYOLDLTQIAFAEDELMLDKKHRYRDIIVDIGIPRLAVYSSLP 566
DB 905 -----SLSGNGSFY--YWDYFT-----NKNSSN-----KVVVAKSA-- 932
QY 567 MHAGNATYDIGSSPVLPHIDHIVVPRYSMLTRNQIATL-----KYVMQHPFVRP 615

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DB 933 --TGNFTLQVADRTGEBFNHNEFLFDASNATRNNLEVTLANGSVDGAKWTKLRRVNGRY 990
QY 616 DWMSKPGHEESSGVIPN---VPLDKRAGNPMWQIISHAEVQKALAGRFAAPDGYTFD 672
DB 991 DLVN-PEVEKRNQTVDTNTTTTPNDIQADAPSAQ---SNNEEIAVETVPPAP-----A 1042
QY 673 PROVLAKETFFVMKGSFISIPRAD---GSSLRTINKSDL-----SOAEQQAQOELLA 720
DB 1043 TESAIASEQPETRPABTAQPAEETNTANSTETAPKSDTATQTEPNSEVSPSTTERKA 1102
QY 721 K-----KNAGATD-----TDKP-----EKKQADKSNENQPSSEAS 752
DB 1103 ENDPQENETVAANEQATEPTPQNGEVAKEQDPVYEANTQTNETQSEGTETQTAETK 1162
QY 753 KEKESDDEFTSLDPYGLDRATLEDHINQLOAKANID-----KRYLIFOP 797
DB 1163 SEPTESVTVSENPQEKTVSQSTEDKVVYEKEKAKVETEEQAKAPVTSKEPPKQAPAP 1222
QY 798 EGVQFYNNKGLVTVYDITKTLQOIMP 822
DB 1223 EGVV-TDQTNAE-----EAQALQOTOP 1242

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RESULT 13
US-08-663-112-2
Sequence 2, Application US/08663112
Patent No. 5849503
GENERAL INFORMATION:
APPLICANT: WAGNITSUMA, Masako
TITLE OF INVENTION: MUTANT PROTEINS OF HUMAN DNA
NUMBER OF SEQUENCES: 7
CORRESPONDENCE ADDRESS:
ADDRESSEE: Finnegan, Henderson, Farabow, Garrett &
STREET: 1300 I Street, N.W.
CITY: Washington
STATE: D.C.
COUNTRY: USA
ZIP: 20005-3315
COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patent Release #1.0, Version #1.30
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/663,112
FILING DATE: 26-NOV-1996
CLASSIFICATION: 435
ATTORNEY/AGENT INFORMATION:
NAME: Einaudi, Carolyn P.
REGISTRATION NUMBER: 32,220
REFERENCE/DOCKET NUMBER: 06609.1488-00000
TELECOMMUNICATION INFORMATION:
TELEPHONE: 202-408-4400
TELEFAX: 202-408-4400
INFORMATION FOR SEQ ID NO: 2:
SEQUENCE CHARACTERISTICS:
LENGTH: 765 amino acids
TYPE: amino acid
TOPOLOGY: linear
MOLECULE TYPE: protein
US-08-663-112-2

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Query Match      3.0%; Score 130; DB 2; Length 765;
Best Local Similarity 19.2%; Pred. No. 0.03;
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QY 86 GDHYHFYNGKVPDAITISELLMTDPNHY--FKQSDVINELLDGYIKVNGNYVYLKPGS 144

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[illegible]

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Matches 180;	Conservative 131;	Microbial 131;		

38 Mismatched 325; Indels 322; Gaps 49;

204 HMN-ADTDYSIAEAAFNKCGETAMTINGCPWMSNIDTSKYNVGYT-----VLPRFKGQPSK 257

85 HGDHYHFNKGVYDAIISSELLMTDPNYHKQSDVINEILDGVIKNGNYYVLKPGS 144
| : :: | : | : | : | : | : | :
258 -----PFGVLSAGINAAAPN-----KELAKFELENYLLTDEG-----LRAVN 295

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145 KRKNIR--TKQIAEOYAK-----GTKEAKERG--LAQVAHS---KEEVAVNEAKRQ 191
    | | : | : | | | | : | : | : | : | : | : | : | : | : | : |
296 KKKPLGAAVAKSYEEELAKDPRIATMENAGGEIMINIPQNSAFWAVRTVINAA--S 353

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192 GRYTTDGYIFSPDIDDLGDALVPHGNHYIPKDLSPSELAAQAQVWSQKGRGA 251
|||:
354 GRQTVDEA-----LKDAQTSSSVRCPC 327

252 RPSDYRPTAPGRKAPID-----DVTINRGQHQPNDNGYHPA 290
 || : :
 378 -----IGRRNSQLVSVAGTEGTNODISLKEFFETITSTPAHCCVETDQIADK : 400

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291 PPRPDASQKHQRDEFKGTFKELDQL-----HRLD-----LKYRH 328
    | : : : | : |
429 KPEATDSGAMSHKLE--KADLLKATOFOITANWGDNDVMDYNTN-----|
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329 VEEDGLIEFTOVIKSNAF-GYVPHGDHYIIP-RSOLSPLEMEADRYLAGOTDDNDS 386
::|||::|||::|||::|||::|||::|||::|||::|||::|||::|||::|||::|||::|||
487 ADKGGSYLPTOPVOEFLISCUV-EEUUVKNDGKQDQVHSDHSHNDUIFVLDFASDAITDRNGKYVF 486

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387 GSDHSPDSKE-----VTHFLGHRFKAYSGLDGRPYTSDAYFSKSTHSVDKS 438
    : | :          : | : : | : : | : | : . | : |
542 -----FDDPKRGTWATN-----                     *|*|*|*|

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[illegible]

350 1V1-HDNDIFRT-----LPMDOEFTYRVANREQA---YRINKKSGLINEINTDILI 637
498 SRKVTKDGKVGYPMPKDKDY-----FYARY-QLDTQIAFAEQELMLKDKKHYR 546

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638 SEKY-----YVLKKGCEKPYDPEDFRSHLKLFTIKYVDVDNELLSEQLTASERNIDE 690
547 YDIVDTGIEPRLADVSSLPMMAGNATYDTGSSFVLPHIDIHIVERYSWLT----- 597

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691 RDLYD-----PRDKAKLLN-----NLDAFGIMDYT-LTGKVEDNHDD 727
598 RNQIATIKYWQHPE-----VRPDVNSKPGHE-----EGSGVIPNVTPLDKRAGM 642

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Mon Dec 3 07:54:20 2001

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Page 12

Db 728 TNRITV-YMKRPEGENASYHLAYDKDRYTEEREYVSYLRTGPIPD-NPNDKN--- 782
QY 643 PMMOIHSAEVOKALAGRPAADGYIEDPRYLAKETFWKDSFSIPRA-----DG 696
Db 783 -NSOLVSV---AGTEGTMODISLKEFFE-IDLTSPHAGGTBEGCLSPKSKPRATDSG 836
QY 697 SLSRTINKSDLSQAEWMOAOELLAKN-----ACDATDTDKPEKQOAKDSNEN 745
Db 837 AMSHKLKADLLKALQEO---LIANYHNDYFEVIDFASDARITDRNGKVYFADKDSV 893
QY 746 OOPSASKE-----EK-----ESDDEFDSLPDYGDLR 772
Db 894 TLPTQVQGEFLSLGHVRYRKEKPIQNOAKSVDEYVQFTPLPDDDFRGLKDKL 951
QY 773 ATLEHINLOAKANIDPKYLFQPE-----GVQFYKNGELVYDIKTLOQINP 822
Db 952 -----LKTALIGDITTSOELLQAQSLNKNHPGYTYERDSSIVYHMDNDFRTILP 1003

RESULT 15
5231168-2
; Patent No. 5231168
; APPLICANT: DZIGIEL, MORTEN; BORE, MARTIN; JEPSEN, SOREN;
; VUUST, JENS; RIENECK, KLAUS; WIND, ANNETTE; JAKOBSEN, PALLE H.
; TITLE OF INVENTION: MALARIA ANTIGEN
; NUMBER OF SEQUENCES: 19
; CURRENT APPLICATION DATA:
; APPLICATION NUMBER: US/07/409, 658
; FILING DATE: 18-SEP-1989
; SEQ ID NO: 2:
; LENGTH: 783
5231168-2

Query Match 2.98; Score 127.5; DB 6; Length 783;
Best Local Similarity 18.38; Pred. No. 0.049;
Matches 159; Conservative 137; Mismatches 294; Indels 281; Gaps 42;

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Db 2 FVSEKSEHEAEN-----EESLSEGHHEIIVPEONNESESKLVNDGGEFAHNEH 57
QY 89 Y-HFYNGKVPYDAIISELLMTDPNHYFKQSDVINELDGYVYKNGYVYLKPSKR 146
Db 58 FSSEVNSSELNENEFVESDKSYTEPAEH---EYVSE-----ESNPEAPNESSI 105
QY 147 KNIRTKQALAEQVAKGTKEAKKGLAQVAHLKSEVAAVNAFAKRGRTTDDGYIISPTD 206
Db 106 EEAHQEELVPEQ---NDESGESGLVD-----NE---EGDFEEPNHEEFPDQ 147
QY 207 IIDLGDALVLPH-----GNHYHYIRKDKLS-PSE-----LAAQAVMSQKQ 248
Db 148 NDSLSSELNSELSEKSVSEPAHEVIVSEKSVSEPAHEVIVSEKSVSEPAHEVIVSEBO 207
QY 249 RGARPSDYRTPAPGRKRAPIPDVTPNG---QGHQPDNGGYHAPRPNDAS----- 298
Db 208 SNNEPSEKKGVPYKPFEEIEKVQPIVDQIIEPNEFVDSQPNQDEPVPSPFVKIEK 267
QY 299 ---ONKHQDERKGTKEFLDQHLRLDLKRAHVEEDGLIEPTQVYKSNAGVYVPHG 354
Db 268 VPSEENKHAADVPEVKE-KENVSEV-----VEKONSQSEVBEIIPVNE----- 309
QY 355 DHYHIIIPSQSLPEMELADRYLAGOTDNDGSDSHKPS---DKVYHTFVIGHRKIKAYG 411
Db 310 DEFEDVHTEDLD-----LDHKTVDPEIYEVEIPELSEHNEVAH----- 348
QY 412 KGLDCKPYDTSDAVYFSK-----ESIHSYDKSGVYTAHGHFHYIGFGELOYELDEV 464
Db 349 -----PEIVELIEVFPPEPNQNNNEFOEINEDDKSA-----HI-----QHEIYEV 386
QY 465 ANMWAKAGQADELVNALDQEGKKEPLFDTKYSRKVTKDGKVGVIKPKDGKDYFYARKQ 524

Db 387 -----BEILLPEDDKNE-----KVEHEIV---EVEILLPEDDKNE---KQ 419
QY 525 LDLTQAFADQELMLKDKKHVR---YDIVDGIIEPRALAVYSSLPMAAGNATYDTGSSFYI 582
Db 420 HEIYEV---EELLPEDDKNEKEHEIYEV---VEILLPEDKNEKGQH-----I 461
QY 583 PHIDHIVVYPSMLTRNOLATIKY-VMOHPVPRPDVMSKPGHEBSGSVJPNVTPLDKRA 641
Db 462 VEVEEI-----LPEDKNEKEHEIYEVVEILLPEDKNEKGQHEIYEV-BEILLPEDK 510
QY 642 PMMOIHSAEVOKALAGRPAADGYIEDPRYLAKETFWKDSFSIPRADG----- 696
Db 511 --NEKQHEIYEVVEILLPEDKNEKGQHEIYEVVEILLPEDKNEK-GQHEIYEVVEILLPED 567
QY 697 -----SLSRTINKSDLSQAEWMOAOELL-----AKNAGDATDTDKPE 734
Db 568 KNEKQHEIYEVVEILLPEDKNEKGQHEIYEVVEILLPEVEIEVPSQNNNENIETIKPE 627
QY 735 EKOQADKSNENQOOPSASKEKESDDFIDSLPDYGLDRATLEDHINLOAKANIDPKYLI 794
Db 628 EKK-----NEFSVEEK-----AIPQ-----EPVPTINENENTPK--- 658
QY 795 FQPSGVQFYKNGELVYD---IKTLOQINP 822
Db 659 -----PSEGSTKPDIVQIKIYQENKP 680

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Job time: 149 sec

Mon Dec 3 07:54:20 2001

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Page 13

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r

GenCore version 4.5
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OM protein - protein search, using sw model

Run on: December 3, 2001, 07:22:27 ; Search time 370.05 Seconds
(without alignments)
616.766 Million cell updates/sec

Title: US-09-645-835A-6
4363

Sequence: 1 VKRTYGYISVAAILLATHI.....YNNKGEIYTYDIKTLQIIMP 822

Scoring table: BLASTSUM62
Gapop 10.0 , Gapext 0.5

Searched: 3148936 seqs, 27657034 residues

Total number of hits satisfying chosen parameters: 3148936

Minimum DB seq length: 0

Maximum DB seq length: 200000000

Post-processing: Minimum Match 0%
Maximum Match 100%

Listing first 45 summaries

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Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

Result No.	Score	Query Match	Length	DB ID	Description
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2	4363	100.0	822	20	US-09-645-835-6
3	4363	100.0	822	20	US-09-645-835A-6
4	4312.5	98.8	824	18	US-09-471-255-83
5	4308	98.8	823	18	US-09-471-255-81
6	4283.5	98.2	825	1	PCT-US00-23417-2
7	4283.5	98.2	825	20	US-09-645-835-2
8	4283.5	98.2	825	20	US-09-645-835A-2
9	4157	95.3	793	16	US-09-252-088-15

10	4157	95.3	793	16	US-09-252-088B-15	Sequence 15, Appl
11	3758	86.1	715	16	US-09-252-088-16	Sequence 16, Appl
12	3758	86.1	715	16	US-09-252-088B-16	Sequence 16, Appl
13	1054	24.2	819	18	US-09-468-656-10	Sequence 10, Appl
14	1052	24.1	811	18	US-09-471-255-99	Sequence 99, Appl
15	1052	24.1	811	18	US-09-471-255-95	Sequence 95, Appl
16	1041	23.9	834	18	US-09-471-255-95	Sequence 95, Appl
17	1039.5	23.8	807	15	US-09-107-433-4309	Sequence 4309, Ap
18	1039.5	23.8	807	18	US-09-471-255-101	Sequence 101, App
19	1039.5	23.8	838	18	US-09-471-255-14	Sequence 14, Appl
20	1035.5	23.7	811	18	US-09-583-110-5325	Sequence 5225, Ap
21	1035.5	23.7	811	18	US-09-471-255-96	Sequence 96, Appl
22	1035.5	23.7	811	18	US-09-471-255-98	Sequence 98, Appl
23	1034.5	23.7	816	18	US-09-471-255-92	Sequence 92, Appl
24	1034.5	23.7	816	18	US-09-471-255-93	Sequence 93, Appl
25	1034.5	23.7	826	21	US-09-283-826-5	Sequence 5, Appl
26	1033	23.7	805	18	US-09-787-826-5	Sequence 100, App
27	1033	23.7	838	18	US-09-468-656-4	Sequence 47, Appl
28	1028.5	23.6	811	18	US-09-471-255-97	Sequence 97, Appl
29	1024	23.5	819	18	US-09-471-255-73	Sequence 73, Appl
30	1024	23.5	819	18	US-09-471-255-90	Sequence 90, Appl
31	1021.5	23.4	763	21	US-09-536-784-66	Sequence 66, Appl
32	1021.5	23.4	763	21	US-09-765-271-66	Sequence 66, Appl
33	1021.5	23.4	763	21	US-09-765-272-66	Sequence 66, Appl
34	1019.5	23.4	816	18	US-09-471-255-94	Sequence 94, Appl
35	1017.5	23.3	820	18	US-09-471-255-91	Sequence 91, Appl
36	1017	23.3	840	18	US-09-471-255-4	Sequence 4, Appl
37	1017	23.3	851	19	US-09-583-110-3850	Sequence 3850, Ap
38	1000.5	22.9	821	18	US-09-471-255-60	Sequence 60, Appl
39	1000.5	22.9	821	18	US-09-471-255-102	Sequence 102, Appl
40	999	22.9	690	10	US-09-471-255-79	Sequence 79, Appl
41	955.5	21.9	816	20	US-09-645-835A-7	Sequence 7, Appl
42	955.5	21.9	819	18	US-09-468-656-8	Sequence 8, Appl
43	942	21.6	829	19	US-09-583-110-3851	Sequence 3851, Ap
44	934	21.4	796	19	US-09-536-784-56	Sequence 56, Appl
45	934	21.4	796	21	US-09-765-271-56	Sequence 56, Appl

ALIGNMENTS

RESULT 1
PCT-US00-23417-6
; Sequence 6, Application PC/TUS0023417
; GENERAL INFORMATION:
; APPLICANT: Helmricks, Jon
; APPLICANT: Johnson, Leslie S.
; APPLICANT: Koenig, Scott
; TITLE OF INVENTION: Pneumococcal Protein Homologs and Fragments for
; FILE REFERENCE: 469201-402
; CURRENT APPLICATION NUMBER: PCT/US00/23417
; CURRENT FILING DATE: 2000-08-25
; PRIOR APPLICATION NUMBER: U.S. 60/150,750
; PRIOR FILING DATE: 1999-08-25
; NUMBER OF SEQ ID NOS: 6
; SOFTWARE: Patent Ver. 2.1
; SEQ ID NO 6
; LENGTH: 822
; TYPE: PRT
; ORGANISM: Streptococcus agalactiae
PCT-US00-23417-6

Query Match 100.0%; Score 4363; DB 1; Length 822;
Best Local Similarity 100.0%; Pred. No. 0;
Matches 822; Conservative 0; Mismatches 0; Indels 0; Gaps 0;
1 VKRTYGYISVAAILLATHIGSYOLGKHHMGLATKDNQIAYIDSKGKVKAPKTKMTQD 60
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    61 ISAEGISAEQIVKTTDGGVYTSHGDIHYEYNGKVPYDAIISSELLMTDPNHYHFKOSDV 120
OY 121 INEILDGYIVKNGVYVYLLPGSKRNKIRTKQOIAEQVAKGTKEAKEGLAOVAHLSKE 180
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OY 121 INEILDGYIVKNGVYVYLLPGSKRNKIRTKQOIAEQVAKGTKEAKEGLAOVAHLSKE 180
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    121 INEILDGYIVKNGVYVYLLPGSKRNKIRTKQOIAEQVAKGTKEAKEGLAOVAHLSKE 180
OY 181 EVAANEAKROGRTTDDGYTFSPDIIIDLDGAYLVPHGNHYHYPKKDLSPSELAQAQ 240
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    301 KHORDEFKGTFFKELLDDLHRLDLKRYRHEEDGLIFEPYQVIRKSNAGFYVPHGDHYHII 360
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OY 361 PRSOLSPLEMLADRYLAGOTDNDGSDHSPDKEVTHFLGHRIRKAYGKGLDGPYD 420
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OY 481 LDOEGEKERPLEFTDKKYSRKVTAKGKRGVYIMPKDKGDFYARVOLDLQIAFAEQELMLK 540
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OY 541 DKHRYRDIYDGTGIEPRILAVDVSSLPMAHAGNATYDTGSSFVIPHIDHIVVPSMLTRNQ 600
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    661 GREAAPDGYTFDPDYLAKETFWKDGFSIPRADGSSLRTINKSDLSQAEMQAOQELLA 720
OY 661 GREAAPDGYTFDPDYLAKETFWKDGFSIPRADGSSLRTINKSDLSQAEMQAOQELLA 720
    |||
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    |||
    721 KKNAGDATDTPDKPEKQOAKSNENQOPEASEAKESDSDPIDSIPYGLDRATLEDHIN 780
OY 721 KKNAGDATDTPDKPEKQOAKSNENQOPEASEAKESDSDPIDSIPYGLDRATLEDHIN 780
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    781 QLAQKANIIPKYLIFQPEGVQFYNNKNGELVYDITLQOINP 822
OY 781 QLAQKANIIPKYLIFQPEGVQFYNNKNGELVYDITLQOINP 822
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; ORGANISM: Streptococcus agalactiae
US-09-645-835-6

Query Match      100.0%; Score 4363; DB 20; Length 822;
Best Local Similarity 100.0%; Pred. No. 0;
Matches 822; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

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OY 1 VKTIYGYIGSVAAILLATHIGSYOLGKHHMGLATKDNQIAYIDSGKGVKAPKTNKTMQ 60
    |||
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OY 61 ISAEGISAEQIVKTTDGGVYTSHGDIHYEYNGKVPYDAIISSELLMTDPNHYHFKOSDV 120
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OY 61 ISAEGISAEQIVKTTDGGVYTSHGDIHYEYNGKVPYDAIISSELLMTDPNHYHFKOSDV 120
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OY 121 INEILDGYIVKNGVYVYLLPGSKRNKIRTKQOIAEQVAKGTKEAKEGLAOVAHLSKE 180
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    661 GREAAPDGYTFDPDYLAKETFWKDGFSIPRADGSSLRTINKSDLSQAEMQAOQELLA 720
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    721 KKNAGDATDTPDKPEKQOAKSNENQOPEASEAKESDSDPIDSIPYGLDRATLEDHIN 780
OY 721 KKNAGDATDTPDKPEKQOAKSNENQOPEASEAKESDSDPIDSIPYGLDRATLEDHIN 780
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    781 QLAQKANIIPKYLIFQPEGVQFYNNKNGELVYDITLQOINP 822
OY 781 QLAQKANIIPKYLIFQPEGVQFYNNKNGELVYDITLQOINP 822
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RESULT 2
US-09-645-835-6
; Sequence 6, Application us/09645835
; GENERAL INFORMATION:
; APPLICANT: Heinrichs, Jon
; APPLICANT: Johnson, Leslie S.
; APPLICANT: Koenig, Scott
; APPLICANT: Adamou, John E.
; TITLE OF INVENTION: Pneumococcal Protein Homologs and Fragments for
; TITLE OF INVENTION: Vaccines
; FILE REFERENCE: 469201-402
; CURRENT APPLICATION NUMBER: US/09/645, 835
; CURRENT FILING DATE: 2000-08-25
; PRIOR APPLICATION NUMBER: U.S. 60/150,750
; PRIOR FILING DATE: 1999-08-25
; NUMBER OF SEQ ID NOS: 6
; SOFTWARE: PatentIn Ver. 2.1
; SEQ ID NO 6
; LENGTH: 822
; TYPE: PRT

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RESULT 3
US-09-645-835A-6
; Sequence 6, Application us/09645835A
; GENERAL INFORMATION:
; APPLICANT: Heinrichs, Jon
; APPLICANT: Johnson, Leslie S.
; APPLICANT: Koenig, Scott
; APPLICANT: Adamou, John E.

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;; TITLE OF INVENTION: Pneumococcal Protein Homologs and Fragments for
;; FILE REFERENCE: 469201-493
;; CURRENT APPLICATION NUMBER: US/09/645,835A
;; PRIOR FILING DATE: 1999-08-25
;; NUMBER OF SEQ ID NOS: 7
;; SOFTWARE: Patent In Ver. 2.1
;; SEQ ID NO: 6
;; LENGTH: 822
;; TYPE: PRF
;; ORGANISM: Streptococcus agalactiae
US-09-645-835a-6

Query Match 100.0%; Score 4363; DB 20; Length 822;
Best Local Similarity 100.0%; Pred. No. 0;
Matches 822; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

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DB 1 VKKTYGYSVAAILLATHIGSYOLGKHHMGLATKNOIAYIDDSKGVAKPKTKTMDQ 60
QY 61 ISAEGISAEQIYVKTIDGQYVSHGDHYFYNGKVPYDAIISELLMTDPNHFKOSDV 120
DB 61 ISAEGISAEQIYVKTIDGQYVSHGDHYFYNGKVPYDAIISELLMTDPNHFKOSDV 120
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DB 121 INEILDGYVYKNGNYYVYVYKPGSKRNKIRTKQIAEOVAKGTKEAKGLAQAHLNLSKE 180
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DB 181 EVAAVNEAKRGQRYTTDDGYIFSPDTIIDLDGAYLVPHGNHYHYIPKDLSPSELAQA 240
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DB 301 KHODEFGKTFKELLQHLRLDLKYRHVEEDGLIFEPYOVAKSNAFGYVPHGDHYHI 360
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DB 361 PRSGLSPELEMLADRYLAGQTDNDSDGSDSKSPDKVETHTFLGHRIRKAYGKGLDGKPYD 420
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DB 421 TSDAVYFSKESIHSDKSGVTAKHGDHFIYIGFGELOYELDEVANMWKAKGQADELVAA 480
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DB 481 LDQOGKEKPLFDTKKVSRYTKDGVGYIMPDKGKDYFARYQOLDTOIAFAEDELMLK 540
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DB 541 DKKHRYDYDVTGIEPRILADVSSLPMHAGNATYDTGSSFYIPIHDIHVPYSWLTNRQ 600
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DB 721 KKNAGDATDIDKPEKQOAKSNENQOPSEASKVEKESDPIIDSLPDYGLDRAATLEBDHN 780
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RESULT 4
US-09-471-255-83
; Sequence 83, Application US/09471255
; GENERAL INFORMATION:
; APPLICANT: BIOCHEM PHARMA INC.
; APPLICANT: HAMEL, Jos,e
; APPLICANT: BRODEUR, Bernard R.
; APPLICANT: PINEAU, Isabelle
; APPLICANT: MARTIN, Denis
; APPLICANT: RIOUX, Cl,ment
; TITLE OF INVENTION: NOVEL STREPTOCOCCUS ANTIGENS
; FILE REFERENCE: 12806-11PCT
; CURRENT APPLICATION NUMBER: US/09/471,255
; PRIOR FILING DATE: 1999-12-23
; PRIOR APPLICATION NUMBER: US 60/113,800
; NUMBER OF SEQ ID NOS: 102
; SOFTWARE: FastSeq for Windows Version 3.0
; SEQ ID NO: 83
; LENGTH: 824
; TYPE: PRF
; ORGANISM: S. pneumoniae
US-09-471-255-83

Query Match 98.8%; Score 4312.5; DB 18; Length 824;
Best Local Similarity 98.9%; Pred. No. 0;
Matches 814; Conservative 3; Mismatches 5; Indels 1; Gaps 1;

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DB 1 VKKTYGYSVAAILLATHIGSYOLGKHHMGLATKNOIAYIDDSKGVAKPKTKTMDQ 60
QY 61 ISAEGISAEQIYVKTIDGQYVSHGDHYFYNGKVPYDAIISELLMTDPNHFKOSDV 120
DB 61 ISAEGISAEQIYVKTIDGQYVSHGDHYFYNGKVPYDAIISELLMTDPNHFKOSDV 120
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DB 121 INEILDGYVYKNGNYYVYVYKPGSKRNKIRTKQIAEOVAKGTKEAKGLAQAHLNLSKE 180
QY 181 EVAAVNEAKRGQRYTTDDGYIFSPDTIIDLDGAYLVPHGNHYHYIPKDLSPSELAQA 240
DB 181 EVAAVNEAKRGQRYTTDDGYIFSPDTIIDLDGAYLVPHGNHYHYIPKDLSPSELAQA 240
QY 241 AYWQKQGRGARSDDYRPTAPGRKAPIDVTPNPGQGHQPDNGGYHPPRPNDASQN 300
DB 241 AYWQKQGRGARSDDYRPTAPGRKAPIDVTPNPGQGHQPDNGGYHPPRPNDASQN 300
QY 301 KHODEFGKTFKELLQHLRLDLKYRHVEEDGLIFEPYOVAKSNAFGYVPHGDHYHI 360
DB 301 KHODEFGKTFKELLQHLRLDLKYRHVEEDGLIFEPYOVAKSNAFGYVPHGDHYHI 360
QY 361 PRSGLSPELEMLADRYLAGQTDNDSDGSDSKSPDKVETHTFLGHRIRKAYGKGLDGKPYD 420
DB 361 PRSGLSPELEMLADRYLAGQTDNDSDGSDSKSPDKVETHTFLGHRIRKAYGKGLDGKPYD 420
QY 421 TSDAVYFSKESIHSDKSGVTAKHGDHFIYIGFGELOYELDEVANMWKAKGQADELVAA 480
DB 421 TSDAVYFSKESIHSDKSGVTAKHGDHFIYIGFGELOYELDEVANMWKAKGQADELVAA 480
QY 481 LDQOGKEKPLFDTKKVSRYTKDGVGYIMPDKGKDYFARYQOLDTOIAFAEDELMLK 540
DB 481 LDQOGKEKPLFDTKKVSRYTKDGVGYIMPDKGKDYFARYQOLDTOIAFAEDELMLK 540
QY 541 DKKHRYDYDVTGIEPRILADVSSLPMHAGNATYDTGSSFYIPIHDIHVPYSWLTNRQ 600
DB 541 DKKHRYDYDVTGIEPRILADVSSLPMHAGNATYDTGSSFYIPIHDIHVPYSWLTNRQ 600

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OY      601  IATIKYMOHEVAPDWSKRGHEESSVLPNTPLDKRGMNMOIHSAEVQKALAE 660
Db      601  IATIKYMOHEVAPDWSKRGHEESSVLPNTPLDKRGMNMOIHSAEVQKALAE 660
OY      661  GRFAAPDGYIFDPDVLAKETFEWKDGSSFIIPRADGSSLRTINKSDLSQAEWQAOELLA 720
Db      661  GRFATPGGYIFDPDVLAKETFEWKDGSSFIIPRADGSSLRTINKSDLSQAEWQAOELLA 720
OY      721  KKNMGDATTDTKPREKOAOAKSNNQOPSEASK-EKEESDFFIDSLPDYGLDRATLEDHT 779
Db      721  KKNMGDATTDTKPREKOAOAKSNNQOPSEASK-EKEESDFFIDSLPDYGLDRATLEDHT 780
OY      780  NOLAOKANIDPKYLIFOPEGVOFYNNKGELVTDIKTLQOINP 822
Db      781  NOLAOKANIDPKYLIFOPEGVOFYNNKGELVTDIKTLQOINP 823

RESULT      5
US-09-471-255-81
; Sequence 81, Application US/09471255
; GENERAL INFORMATION:
; APPLICANT: BIOCHEM PHARMA INC.
; APPLICANT: HAMEL, Jos,e
; APPLICANT: BRODEUR, Bernard R.
; APPLICANT: PINEAU, Isabelle
; APPLICANT: MARTIN, Denis
; APPLICANT: RIOUX, Cl,ment
; TITLE OF INVENTION: NOVEL STREPTOCOCCUS ANTIGENS
; FILE REFERENCE: 12806-11PCT
; CURRENT APPLICATION NUMBER: US/09/471,255
; PRIOR FILING DATE: 1999-12-23
; PRIOR APPLICATION NUMBER: US 60/113,800
; NUMBER OF SEQ ID NOS: 102
; SOFTWARE: FastSeq for Windows Version 3.0
; SEQ ID NO 81
; LENGTH: 823
; TYPE: PRT
; ORGANISM: S. pneumoniae
; US-09-471-255-81

```

Query Match	98.78	Score 4308	DB 18	Length 823
Best Local Similarity	98.5%	Pred. No. 0		
Matches	810	Conservative	6	Mismatches 6; Indels 0; Gaps
QY	1	VKTYGYIGSYAAILLATHTIGSYOLGKHHMGLATKNOAIYIDDSKGVAKPTNTKMDQ	60	
Db	1	VKTYGYIGSYAAILLATHTIGSYOLGKHHMGLATKNOAIYIDDSKGVAKAPTKNTKMDQ	60	
QY	61	ISAEGTISAEIOIVAKITDQGVYTHSGHGHYHYNCKVYDAIISPELLMTDPNHFKQSDV	120	
Db	61	ISAEGTISAEIOIVAKITDQGVYTHSGHGHYHYNCKVYDAIISPELLMTDPNHFKQSDV	120	
QY	121	INELIDGVIVVNGNYYUYLLPGRSKRNKIRTKQIADQVAKGTKEAKEKGLAQAHLSTKE	180	
Db	121	INELIDGVIVVNGNYYUYLLPGRSKRNKIRTKQIADQVAKGTKEAKEKGLAQAHLSTKE	180	
QY	181	EVAAVNEKKRGGRTTDDGCTFFSPDIIIDLGDALVLPFGHNHYITPKKLSPELAAQ	240	
Db	181	EVAAVNEKKRGGRTTDDGCTFFSPDIIIDLGDALVLPFGHNHYITPKKLSPELAAQ	240	
QY	241	AYMSQKQGRGARPSDYRTPAPGRKRAPIPVTPNPPGQGHQPDNGGYNHAPPPRNDASQN	300	
Db	241	AYMSQKQGRGARPSDYRTPAPGRKRAPIPVTPNPPGQGHQPDNGGYNHAPPPRNDASQN	300	
QY	301	KHQDFEFGKTFKELLQHLRLDLKYRHHVEEDGLIFETQYIKSNAEGYVVPFHGDHYHII	360	
Db	301	KHQDFEFGKTFKELLQHLRLDLKYRHHVEEDGLIFETQYIKSNAEGYVVPFHGDHYHII	360	
QY	361	PRSQLSPLEMELADRYLAGQTDNDMSGSDHSKPSDKVEYTHFELGHRITKATAGKGLDGKPYD	420	
Db	361	PRSQLSPLEMELADRYLAGQTDNDMSGSDHSKPSDKVEYTHFELGHRITKATAGKGLDGKPYD	420	

Qy	421	TSDAVFEKESIHSVXDSGVTAKGHDHNYTGFELOYELDEVAANVAKKGOADELVAA	480
Db	421	TSDAVFSKESIHSVXDSGVTAKKGDHFHYTGFELOYELDEVAANVAKKGOADELVAA	480
Qy	481	LDQEGKEKPLEFDTKRVKSVKVTYKDGKVYIMPKDKDYFYARYOLDLTQIATAEQELMLK	540
Db	481	LDQEGKEKPLEFDTKRVKSVKVTYKDGKVYIMPKDKDYFYARYOLDLTQIATAEQELMLK	540
Qy	541	DKKHRYDVTGTGIEPRLAVYVSSLPMHAGATYDTCSSFYIPIHDHINVPVSWLTRNQ	600
Db	541	DKKHRYDVTGTGIEPRLAVYVSSLPMHAGATYDTCSSFYIPIHDHINVPVSWLTRNQ	600
Qy	601	IATIKYVQHGHEVPAPDWSKPGHESSGVSIPNVTPLTKRAGMPMMQIHSASEYOKALAE	660
Db	601	IATIKYVQHGHEVPAPDWSKPGHESSGVSIPNVTPLTKRAGMPMMQIHSASEYOKALAE	660
Qy	661	GRFAAPDGYIFDPDRVLAKETFWVKDGSFSIPRADSSLRTINKSDLSQAEWQAOAELLA	720
Db	661	GRFAAPDGYIFDPDRVLAKETFWVKDGSFSIPRADSSLRTINKSDLSQAEWQAOAELLA	720
Qy	721	KNKAGDADDTQKPEEKQOAKDSNENQOQSPSAKSKREKSSDPFIDSLPYGADRATLEBDHN	780
Db	721	KNKAGDADDTQKPEEKQOAKDSNENQOQSPSAKSKREKSSDPFIDSLPYGADRATLEBDHN	780
Qy	781	QLAQKANTDPKYLIFQEPGVOFYKKNGLVLYDITKTLQOQINP	822
Db	781	QLAQKANTDPKYLIFQEPGVOFYKKNGLVLYDITKTLQOQINP	822

	RESULT	6	PCT-US00-23417-2
	:	Sequence 2,	Application PC/TUS0023417
	:	GENERAL INFORMATION:	
	:	APPLICANT:	Heinrichs, Jon
	:	APPLICANT:	Johnson, Leslie S.
	:	APPLICANT:	Koenig, Scott
	:	APPLICANT:	Adamou, John E.
	:	TITLE OF INVENTION:	Pneumococcal Protein Homologs and Fragments for
	:	TITLE OF INVENTION:	Vaccines
	:	FILE REFERENCE:	469201-402
	:	CURRENT APPLICATION NUMBER:	PCT/US00/23417
	:	CURRENT FILING DATE:	2000-08-25
	:	PRIOR APPLICATION NUMBER:	U.S. 60/150,750
	:	PRIOR FILING DATE:	1999-08-25
	:	NUMBER OF SEQ ID NOS:	6
	:	SOFTWARE:	Patentin Ver. 2.1
	:	SEQ ID NO 2	
	:	LENGTH:	825
	:	TYPE:	PRT
	:	ORGANISM:	Streptococcus pyogenes
	:	PCT-US00-23417-2	
Query Match	98.2%;	Score 4283.5;	DB 1; Length 825;
Best Local Similarity	98.2%;	Pred. No. 0's	
Matches 810; Conservative	6;	Mismatches	6; Indels 3; Gaps
1 VKRTGYIGTSVAAILLATIHGISVOLGKHHMGLATKDNOJAYIDDSKGKVAKERTNKTMDO	60		
1 VAKTGYIGISVAAIILLATHIGSYOLGKHNMGSATKDNQJAYIDDSKGKAKAKRTNKTMD	60		
QY 1SAEESISAEQIVVKVTDDGVYTHSHGDHAFHYNGKVPYAIISSEELMTDPNTRFKQSDV	120		
Db 61 IFAEEISIAEQIVLTKTDGGVYTHSHGDHAFHYNGKVPYAIISSEELMTDPNTRFKQSDV	120		
QY 121INEILDGVYIKVINGNYLYLVKPGSKRRNIRTRKOQLAEOYAKGTKEAKEKGLAOVAHLKE	180		
Db 121INEILDGVYIKVINGNYLYLVKPGSKRRNIRTRKOQLAEOYAKGTKEAKEKGLAOVAHLKE	180		
QY 181EYAANVEAKRGRYTITDGCYIFSPDIIDDLGDAYLVPHGNHYHTPKDLSPSSELAAAO	240		
Db 181EYAANVEAKRGRYTITDGCYIFSPDIIDDLGDAYLVPHGNHYHTPKDLSPSSELAAAO	240		
QY 181EYAANVEAKRGRYTITDGCYIFSPDIIDDLGDAYLVPHGNHYHTPKDLSPSSELAAAO	240		
Db 181EYAANVEAKRGRYTITDGCYIFSPDIIDDLGDAYLVPHGNHYHTPKDLSPSSELAAAO	240		

Oy	241	AYMSQKORGARSPSYRPT--PAPRRKAPLPDVPYNGGQGHQPNNGYHNPAPRPNNAS	298
Db	241	AYMSQKORGARSPSYRPTAPAPRRKAPLPDVPYNGGQGHQPNNGYHNPAPRPNNAS	300
Oy	299	ONKHORDEFKGTFFELLDOHLRLDLKFRHVEEDGLIFEPTQVIKSNAGFYVVPBGDHYH	358
Db	301	ONKHORDEFKGTFFELLDOHLRLDLKFRHVEEDGLIFEPTQVIKSNAGFYVVPBGDHYH	360
Oy	339	IIPRSQSLPLEMELADRLLAGOTDDBNDGSDHSDKSDKEVYHTFELGHRIKAYGKLDGKP	418
Db	361	IIPRSQSLPLEMELADRLLAGOTDEDDSDGSHSKPSDKEVYHTFELGHRIKAYGKLDGKP	420
Oy	419	YDTSAYVFSKESHSYVSKSGVTAAGHGHFHYIGSGLEQYELDEAVAMVAKKGADELY	478
Db	421	YDTSAYVFSKESHSYVSKSGVTAAGHGHFHYIGSGLEQYELDEAVAMVAKKGADELY	480
Oy	479	AALDOEGEKERPLEPDTKKVYSRKVYTKDQKVGUYTMPKDQKDYFYARYQOLDLTOYAFAEQELM	538
Db	481	AALDOEGEKERPLEPDTKKVYSRKVYTKDQKVGUYTMPKDQKDYFYARYQOLDLTOYAFAEQELM	540
Oy	539	LKDKKHRYRDIYDTGIEPRLAVDYSSLPMHAGNATYDTGSSFVPIHDHIIHVVPYSLWLR	598
Db	541	LKDKKHRYRDIYDTGIEPRLAVDYSSLPMHAGNATYDTGSSFVPIHDHIIHVVPYSLWLR	600
Oy	599	NOIATIKYVMQHPVPRPVWSKPGHEEGSVYIPNTPLDKRAGMNMQIISHAEVQKAL	658
Db	601	DOIATIKYVMQHPVPRPVWSKPGHEEGSVYIPNTPLDKRAGMNMQIISHAEVQKAL	660
Oy	659	AEGFPAADPGYIFDPDVLAKETFWMKGSFSIIPADSSLTITKKSLSQAEMQAOEL	718
Db	661	AEGFPAADPGYIFDPDVLAKETFWMKGSFSIIPADSSLTITKKSLSQAEMQAOEL	720
Oy	719	LAKNAGADATDTDKPEEKQOAKDSMENOQPSSEASK-EEKESDDFTDSLDPYGLDRATLED	777
Db	721	LAKNAGADATDTDKPEEKQOAKDSMENOQPSSEASK-EEKESDDFTDSLDPYGLDRATLED	780
Oy	778	HINOLAOKANIDPKYLIFQPEGVQYTKNKGELVYDITLQOINP	822
Db	781	HINOLAOKANIDPKYLIFQPEGVQYTKNKGELVYDITLQOINP	825
RESULT 7			
US-09-645-835-2			
Sequence 2, Application US/09645835			
GENERAL INFORMATION:			
APPLICANT: Heinrichs, Jon			
APPLICANT: Johnson, Leslie S.			
APPLICANT: Koenig, Scott			
APPLICANT: Adamou, John E.			
TITLE OF INVENTION: Pneumococcal Protein Homologs and Fragments for			
FILE REFERENCE: 469201-402			
CURRENT APPLICATION NUMBER: US/09/645,835			
CURRENT FILING DATE: 2000-08-25			
PRIOR APPLICATION NUMBER: U.S. 60/150,750			
PRIOR FILING DATE: 1999-08-25			
NUMBER OF SEQ ID NOS: 6			
SOFTWARE: PatentIn Ver. 2.1			
SEQ ID NO 2			
LENGTH: 825			
TYPE: PRT			
ORGANISM: Streptococcus pyogenes			
US-09-645-835-2			

Query Match	98.2%	Score 4283.5	DB 20	Length 825
Best Local Similarity	98.2%	Pred. No. 0		
Matches	810	Conservative	6	Mismatches 6; Indels 3; Gaps 2.
QY	1	VKRTGYIGSVAAILLATHIGSYOLGKHHMGLATDONOATYIDDSKGYKAPKXTKTMDO	60	
DB	1	VKRTGYIGSVAAILLATHIGSYOLGKHHMGSATDNDNOATYIDDSKGRKAKARTKTKTMDO	60	

QY	61	ISEEGISAEOIYVKITDQGVVTSHGSHYHFNKVCVYDIAISELLMTPNPHKOSDV	120
QY	61	ISAEGISAEOIYVKITDQGVVTSHGSHYHFNKVCVYDIAISELLMTPNPHKOSDV	120
Db	61	ISAEGISAEOIYVKITDQGVVTSHGSHYHFNKVCVYDIAISELLMTPNPHKOSDV	120
QY	121	INELLIDGVIVVNMNNYVYLLKPGSKRRNIRTKQIAOVAKGTKEAKESKLAOVANLSKE	180
Db	121	INELLIDGVIVVNMNNYVYLLKPGSKRRNIRTKQIAOVAKGTKEAKESKLAOVANLSKE	180
QY	181	EVAAVNEAKROGRYTTDDGYIFESPDIIDLDGDAYLVPHGNHNYIPKOLSPSELAAQ	240
Db	181	EVAAVNEAKROGRYTTDDGYIFESPDIIDLDGDAYLVPHGNHNYIPKOLSPSELAAQ	240
QY	241	AYWSQKQGRGARPDSYRPT--PARGRRKARPJDTYPMPOGQHORDNGCYARPAPRDAS	298
Db	241	AYWSQKQGRGARPDSYRPTAPARGRRKARPJDTYPMPOGQHORDNGCYARPAPRDAS	300
QY	299	ONKHORDEFKAKTEKELLDDQHRIDLKYRHNEDGGLFEPPQVAKSNAFCYVPHGSHYH	358
Db	301	ONKHORDEFKAKTEKELLDDQHRIDLKYRHNEDGGLFEPPQVAKSNAFCYVPHGSHYH	360
QY	359	IIPNSQLSPLEMLADRYLAGQTDNDNGSDSHKSPDKEVYTHFFLGRIRKAYGKGLDKP	418
Db	361	IIPNSQLSPLEMLADRYLAGQTDNDNGSDSHKSPDKEVYTHFFLGRIRKAYGKGLDKP	420
QY	419	YDTSAAVYFSEKSIHSYVKSQVTKAKHGDHPIHYIGFGELEQYELDEVANMWKAKQANDELV	478
Db	421	YDTSAAVYFSEKSIHSYVKSQVTKAKHGDHPIHYIGFGELEQYELDEVANMWKAKQANDELV	480
QY	479	AALDOEGKEKRPFDTKKVSRYKVKDGVGVIIMPKDCKDFYARYQDYLPOIAFAEOLM	538
Db	481	AALDOEGKEKRPFDTKKVSRYKVKDGVGVIIMPKDCKDFYARYQDYLPOIAFAEOLM	540
QY	539	LKDKKHRYDITVDTGIEBRLADVSSLPMAAGNATYDGSSEFVIPHIDHINVPYSWLTR	598
Db	541	LKDKKHRYDITVDTGIEBRLADVSSLPMAAGNATYDGSSEFVIPHIDHINVPYSWLTR	600
QY	599	NOIATIKYVMOHPEVRYPDVWMSRCHESGSYIPVNTPLDKRACRPMNOIHSAEYOKAL	658
Db	601	NOIATIKYVMOHPEVRYPDVWMSRCHESGSYIPVNTPLDKRACRPMNOIHSAEYOKAL	660
QY	659	AEGRPAARDGYIFPRBVDLAKETVWVKDGSFSPRADGSSLRJTNKSDLSQAEWQAOEL	718
Db	661	AEGRPAARDGYIFPRBVDLAKETVWVKDGSFSPRADGSSLRJTNKSDLSQAEWQAOEL	720
QY	719	LAKNAGDATTDKPREKQOAKDSNENQOPEASEAK-EEKESDDEISLDPYGLDRATLED	777
Db	721	LAKNAGDATTDKPREKQOAKDSNENQOPEASEAK-EEKESDDEISLDPYGLDRATLED	780
QY	778	HINOLAQKANIDPKYLIIFQPSGVQFYKKNGBLYYDIKTLOQINP	822
Db	781	HINOLAQKANIDPKYLIIFQPSGVQFYKKNGBLYYDIKTLOQINP	825

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1 RESULT      8
2 US-09-645-835A-2
3
4 : Sequence 2, Application US/09645835A
5
6 : GENERAL INFORMATION:
7
8 : APPLICANT: Heinrichs, Jon
9 : APPLICANT: Johnson, Leslie S.
10 : APPLICANT: Koenig, Scott
11 : APPLICANT: Adamou, John E.
12
13 : TITLE OF INVENTION: Pneumococcal Protein Homologs and Fragments for
14 : TITLE OF INVENTION: Vaccines
15
16 : FILE REFERENCE: 469201-493
17
18 : CURRENT APPLICATION NUMBER: US/09/645, 835A
19
20 : CURRENT FILING DATE: 2000-08-25
21
22 : PRIOR APPLICATION NUMBER: U.S. 60/150,750
23
24 : PRIOR FILING DATE: 1999-08-25
25
26 : NUMBER OF SEQ. ID NOS: 7
27
28 : SOFTWARE: PatentIn Ver. 2.1
29
30 : SEQ ID NO 2
31
32 : LENGTH: 825

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: TYPE: PR1
: ORGANISM: Streptococcus pyogenes
US-09-645-835A-2

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Query Match      98.2%; Score 4283.5; DB 20; Length 825;
Best Local Similarity 98.2%; Pred. No. 0;
Matches 810; Conservative 6; Mismatches 6; Indels 3; Gaps 2;

QY 1 VKRTGYGSAVAILLATHIGSYQLGKHHMGLATKNOIAITDSSKGVKAPKTKMTDQ 60
    1 VKRTGYGSAVAILLATHIGSYQLGKHHMGSATKNOIAYIDSSKGVKAPKTKMTDQ 60
DB 1 VKRTGYGSAVAILLATHIGSYQLGKHHMGSATKNOIAYIDSSKGVKAPKTKMTDQ 60
QY 61 ISAEGISAEQIVAKITPOGYVTSHGDIHYHNGKVPDAITISELMTDNYHFKOSDV 120
    61 ISAEGISAEQIVAKITPOGYVTSHGDIHYHNGKVPDAITISELMTDNYHFKOSDV 120
DB 61 ISAEGISAEQIVAKITPOGYVTSHGDIHYHNGKVPDAITISELMTDNYHFKOSDV 120
QY 121 INEILDGVYIKVNGYVYLKPGSKRKNI RTKQOIAEQVAKGTKEAKGLAQAHLKSKE 180
    121 INEILDGVYIKVNGYVYLKPGSKRKNI RTKQOIAEQVAKGTKEAKGLAQAHLKSKE 180
DB 121 INEILDGVYIKVNGYVYLKPGSKRKNI RTKQOIAEQVAKGTKEAKGLAQAHLKSKE 180
QY 181 EYAAVNEAKRQGRYTTDDGYIFSPDTIIDDLGDAYLVPHGNHYHYPKKDLSPELAAQ 240
    181 EYAAVNEAKRQGRYTTDDGYIFSPDTIIDDLGDAYLVPHGNHYHYPKKDLSPELAAQ 240
DB 181 EYAAVNEAKRQGRYTTDDGYIFSPDTIIDDLGDAYLVPHGNHYHYPKKDLSPELAAQ 240
QY 241 AYWQKOGKRGARPSDYRPT--PAPGRKAPIPDVTPNPGOGHOPDNGGYHAPRPNDAS 298
    241 AYWQKOGKRGARPSDYRPT--PAPGRKAPIPDVTPNPGOGHOPDNGGYHAPRPNDAS 298
DB 241 AYWQKOGKRGARPSDYRPT--PAPGRKAPIPDVTPNPGOGHOPDNGGYHAPRPNDAS 298
QY 299 ONKHORDEFKGTKEKELLQHLRLDLKRYHVEEDGLFEPTQVIKSNAFGVYPHGDHYH 358
    299 ONKHORDEFKGTKEKELLQHLRLDLKRYHVEEDGLFEPTQVIKSNAFGVYPHGDHYH 358
DB 301 ONKHORDEFKGTKEKELLQHLRLDLKRYHVEEDGLFEPTQVIKSNAFGVYPHGDHYH 360
QY 359 IIPRSQSLPEMELADRYLAGOTDNDGSDHSKPSDKEVHTFEGHIRKAYGGLDQKP 418
    359 IIPRSQSLPEMELADRYLAGOTDNDGSDHSKPSDKEVHTFEGHIRKAYGGLDQKP 418
DB 361 IIPRSQSLPEMELADRYLAGOTDNDGSDHSKPSDKEVHTFEGHIRKAYGGLDQKP 420
QY 419 YDTSDAYVFSKESHSVSKSGVTAHKGDFHYIGFGELEQYELDEVANWVAKQADELV 478
    419 YDTSDAYVFSKESHSVSKSGVTAHKGDFHYIGFGELEQYELDEVANWVAKQADELV 478
DB 421 YDTSDAYVFSKESHSVSKSGVTAHKGDFHYIGFGELEQYELDEVANWVAKQADELV 480
QY 479 AALDOEGKEKPLFTTKVSKRYTKQGVGYIMPKDKQDYFYARYOLDLTOIAFAEDEL 538
    479 AALDOEGKEKPLFTTKVSKRYTKQGVGYIMPKDKQDYFYARYOLDLTOIAFAEDEL 538
DB 481 AALDOEGKEKPLFTTKVSKRYTKQGVGYIMPKDKQDYFYARYOLDLTOIAFAEDEL 540
QY 539 LKDKHRYADIYDTGIEPRILAVDSSLPMHAGNATYDTGSSFVLPHTDHIHVVPYSLTR 598
    539 LKDKHRYADIYDTGIEPRILAVDSSLPMHAGNATYDTGSSFVLPHTDHIHVVPYSLTR 598
DB 541 LKDKHRYADIYDTGIEPRILAVDSSLPMHAGNATYDTGSSFVLPHTDHIHVVPYSLTR 600
QY 599 NOIATIKYVQHREVPDVSMPGHEESGSYIPNVTPLDKRAGMNMQIISAEVOKAL 658
    599 NOIATIKYVQHREVPDVSMPGHEESGSYIPNVTPLDKRAGMNMQIISAEVOKAL 658
DB 601 NOIATIKYVQHREVPDVSMPGHEESGSYIPNVTPLDKRAGMNMQIISAEVOKAL 660
QY 659 AEGRPADGVIIFEDPRVLAKETFEWMDGSFISIPRADSSLRTINKSDLSQAEMQAQEL 718
    659 AEGRPADGVIIFEDPRVLAKETFEWMDGSFISIPRADSSLRTINKSDLSQAEMQAQEL 718
DB 661 AEGRPADGVIIFEDPRVLAKETFEWMDGSFISIPRADSSLRTINKSDLSQAEMQAQEL 720
QY 719 LAKKAGATDTRDKEEQQAQADKSNENQOPESEAK--EKESSDDFTDSLPRDGLDRATLED 777
    719 LAKKAGATDTRDKEEQQAQADKSNENQOPESEAK--EKESSDDFTDSLPRDGLDRATLED 777
DB 721 LAKKAGATDTRDKEEQQAQADKSNENQOPESEAK--EKESSDDFTDSLPRDGLDRATLED 780
QY 778 HINQIAQKANIDPKYLIFQPEGVQFYNNKNGELVYTDITLQOINP 822
    778 HINQIAQKANIDPKYLIFQPEGVQFYNNKNGELVYTDITLQOINP 822
DB 781 HINQIAQKANIDPKYLIFQPEGVQFYNNKNGELVYTDITLQOINP 825

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RESULT 9
US-09-252-088-15
: Sequence 15, Application US/09252088
: GENERAL INFORMATION:
: APPLICANT: BRODEUR, Bernard R.
: APPLICANT: RIOUX, Clément
: APPLICANT: BOYER, Martine

```

```

: APPLICANT: CHARLEBOIS, Isabelle
: APPLICANT: HAMEL, Jose
: APPLICANT: MARTIN, Denis
: TITLE OF INVENTION: NOVEL GROUP B STREPTOCOCCUS ANTIGENS
: FILE REFERENCE: 8331-9002
: CURRENT APPLICATION NUMBER: US/09/252,088
: CURRENT FILING DATE: 1999-02-18
: EARLIER APPLICATION NUMBER: US/60/075,425
: EARLIER FILING DATE: 1998-02-20
: NUMBER OF SEQ ID NOS: 44
: SOFTWARE: Patentln Ver. 2.0
: SEQ ID NO 15
: LENGTH: 793
: TYPE: PR1
: ORGANISM: group B streptococcus
US-09-252-088-15

```

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Query Match      95.3%; Score 4157; DB 16; Length 793;
Best Local Similarity 98.5%; Pred. No. 0;
Matches 781; Conservative 6; Mismatches 6; Indels 0; Gaps 0;

QY 30 MGLATKNOIAYIYDSSKGVKAPKTKMTDQISAEGISAEQIVAKITDQGYVTSHGDIHY 89
    30 MGLATKNOIAYIYDSSKGVKAPKTKMTDQISAEGISAEQIVAKITDQGYVTSHGDIHY 89
DB 1 MGLATKNOIAYIYDSSKGVKAPKTKMTDQISAEGISAEQIVAKITDQGYVTSHGDIHY 90
QY 90 HFNNGKVPYALIISEELMTDNYHFKOSDVINEILDGVYIKVNGYVYLKPGSKRKNI 149
    90 HFNNGKVPYALIISEELMTDNYHFKOSDVINEILDGVYIKVNGYVYLKPGSKRKNI 149
DB 61 HFNNGKVPYALIISEELMTDNYHFKOSDVINEILDGVYIKVNGYVYLKPGSKRKNI 120
QY 150 RTKQOIAEQVAKGTKEAKGLAQAHLKSKEEYAAVNEAKRQGRYTTDDGYIFSPDTIID 209
    150 RTKQOIAEQVAKGTKEAKGLAQAHLKSKEEYAAVNEAKRQGRYTTDDGYIFSPDTIID 209
DB 121 RTKQOIAEQVAKGTKEAKGLAQAHLKSKEEYAAVNEAKRQGRYTTDDGYIFSPDTIID 180
QY 210 DLGDAYLVPHGNHYHYPKKDLSPELAAQAAYWQKOGKRGARPSDYRPTAPGRKAPI 269
    210 DLGDAYLVPHGNHYHYPKKDLSPELAAQAAYWQKOGKRGARPSDYRPTAPGRKAPI 269
DB 181 DLGDAYLVPHGNHYHYPKKDLSPELAAQAAYWQKOGKRGARPSDYRPTAPGRKAPI 240
QY 270 PDVTPNPGOGHOPDNGGYHAPRPNDASONKHORDEFKGTKEKELLQHLRLDLKRYH 329
    270 PDVTPNPGOGHOPDNGGYHAPRPNDASONKHORDEFKGTKEKELLQHLRLDLKRYH 329
DB 241 PDVTPNPGOGHOPDNGGYHAPRPNDASONKHORDEFKGTKEKELLQHLRLDLKRYH 300
QY 330 EEDGLIFEPTQVIKSNAFGVYPHGDHYHIIIPRSQSLPEMELADRYLAGOTDNDGSD 389
    330 EEDGLIFEPTQVIKSNAFGVYPHGDHYHIIIPRSQSLPEMELADRYLAGOTDNDGSD 389
DB 301 EEDGLIFEPTQVIKSNAFGVYPHGDHYHIIIPRSQSLPEMELADRYLAGOTDNDGSD 360
QY 390 HSKRPSDEKVTHTFLGHRIRKAYGGLDQKPYDTSDAYVFSKESHSVSKSGVTAHKGDFH 449
    390 HSKRPSDEKVTHTFLGHRIRKAYGGLDQKPYDTSDAYVFSKESHSVSKSGVTAHKGDFH 449
DB 361 HSKRPSDEKVTHTFLGHRIRKAYGGLDQKPYDTSDAYVFSKESHSVSKSGVTAHKGDFH 420
QY 450 YIGFGELEQYELDEVANWVAKQADELVAALDOEGKEKPLFTDKKVSRYTKQGVGY 509
    450 YIGFGELEQYELDEVANWVAKQADELVAALDOEGKEKPLFTDKKVSRYTKQGVGY 509
DB 421 YIGFGELEQYELDEVANWVAKQADELVAALDOEGKEKPLFTDKKVSRYTKQGVGY 480
QY 510 IMPKDKQDYFYARYOLDLTOIAFAEDELMLKDKKHRYDVIYDTGIEPRILAVDSSLPMHA 569
    510 IMPKDKQDYFYARYOLDLTOIAFAEDELMLKDKKHRYDVIYDTGIEPRILAVDSSLPMHA 569
DB 481 IMPKDKQDYFYARYOLDLTOIAFAEDELMLKDKKHRYDVIYDTGIEPRILAVDSSLPMHA 540
QY 570 GNATYDTGSSFVLPHTDHIHVVPYSLTRNOIATIKYVQHREVPDVSMPGHEESGSY 629
    570 GNATYDTGSSFVLPHTDHIHVVPYSLTRNOIATIKYVQHREVPDVSMPGHEESGSY 629
DB 541 GNATYDTGSSFVLPHTDHIHVVPYSLTRNOIATIKYVQHREVPDVSMPGHEESGSY 600
QY 630 IPNVTPLDKRAGMNMQIISAEVOKALAEGRFAPPDGVIIFEDPRVLAKETFEWMDGSF 689
    630 IPNVTPLDKRAGMNMQIISAEVOKALAEGRFAPPDGVIIFEDPRVLAKETFEWMDGSF 689
DB 601 IPNVTPLDKRAGMNMQIISAEVOKALAEGRFAPPDGVIIFEDPRVLAKETFEWMDGSF 660
QY 690 SIPRADSSLRTINKSDLSQAEMQAQELLAKKAGATDTRDKEEQQAQADKSNENQOPE 749
    690 SIPRADSSLRTINKSDLSQAEMQAQELLAKKAGATDTRDKEEQQAQADKSNENQOPE 749
DB 661 SIPRADSSLRTINKSDLSQAEMQAQELLAKKAGATDTRDKEEQQAQADKSNENQOPE 720
QY 750 EASKEEKESDDFTDSLPRDGLDRATLEDHINQIAQKANIDPKYLIFQPEGVQFYNNKNGEL 809
    750 EASKEEKESDDFTDSLPRDGLDRATLEDHINQIAQKANIDPKYLIFQPEGVQFYNNKNGEL 809
DB 721 EASKEEKESDDFTDSLPRDGLDRATLEDHINQIAQKANIDPKYLIFQPEGVQFYNNKNGEL 780

```

QY 810 VTYDIKTLOQINP 822
|
Db 781 VTYDIKTLOQINP 793

RESULT 10
US-09-252-088B-15
; Sequence 15, Application US/09252088B
; GENERAL INFORMATION:
; APPLICANT: BRODEUR, Bernard R.
; APPLICANT: RIOUX, Clement
; APPLICANT: BOYER, Martine
; APPLICANT: CHARLEBOIS, Isabelle
; APPLICANT: HAMEL, Josee
; APPLICANT: MARTIN, Denis
; TITLE OF INVENTION: NOVEL GROUP B STREPTOCOCCUS ANTIGENS
; FILE REFERENCE: 8331-9002
; CURRENT APPLICATION NUMBER: US/09/252,088B
; CURRENT FILING DATE: 1999-02-18
; PRIOR APPLICATION NUMBER: US/60/075,425
; PRIOR FILING DATE: 1998-02-20
; NUMBER OF SEQ ID NOS: 45
; SOFTWARE: Patentin Ver. 2.0
; SEQ ID NO 15
; LENGTH: 793
; TYPE: PRP
; ORGANISM: group B streptococcus
US-09-252-088B-15

Query Match 95.3%; Score 4157; DB 16; Length 793;
Best Local Similarity 98.5%; Pred. No. 0;
Matches 781; Conservative 6; Mismatches 6; Indels 0; Gaps 0;
QY 30 MGLATKDNQIAYIDDSKGAAPKTNTMDQISAEGISAEQIYVKTITDGGYVTHSDHY 89
|
Db 1 MGLATKDNQIAYIDDSKGAAPKTNTMDQISAEGISAEQIYVKTITDGGYVTHSDHY 60
QY 90 HFYNGKVPYDAIIESEELMTDPNHFKOSDIVINEILDGYVYKVGNTYVYLKPGSKRKNI 149
|
Db 61 HFYNGKVPYDAIIESEELMTDPNHFKOSDIVINEILDGYVYKVGNTYVYLKPGSKRKNI 120
QY 150 RTKQOIAEQVAKGTKEAKKEKGLAQVAHLSKEEVAANVEAKRGRTYTDGYESPTDIID 209
|
Db 121 RTKQOIAEQVAKGTKEAKKEKGLAQVAHLSKEEVAANVEAKRGRTYTDGYESPTDIID 180
QY 210 DLGDAYLVPHGNHNYHYPKRLDLSPELAAQAYWSQKRGARPSDYRPPAPGRKAPI 269
|
Db 181 DLGDAYLVPHGNHNYHYPKRLDLSPELAAQAYWSQKRGARPSDYRPPAPGRKAPI 240
QY 270 PDVTPNPGOGHQPNNGCYHAPRPNDASQKHORDEFKGTKEKELLDQHLRLDLKRYHV 329
|
Db 241 PDVTPNPGOGHQPNNGCYHAPRPNDASQKHORDEFKGTKEKELLDQHLRLDLKRYHV 300
QY 330 EEDGLIEPTQVKSNAFQYVYPGHGHHIIPRSQSLPELMELADRYLAGQTEENDSGSD 389
|
Db 301 EEDGLIEPTQVKSNAFQYVYPGHGHHIIPRSQSLPELMELADRYLAGQTEENDSGSE 360
QY 390 HSKPSDKREVTHTFLGHRKAYGKGLDGKPYDTSAYVFSKESHSVDSGVTAKHGCHFH 449
|
Db 361 HSKPSDKREVTHTFLGHRKAYGKGLDGKPYDTSAYVFSKESHSVDSGVTAKHGCHFH 420
QY 450 YIGFELQEYELDEVANVAKGADELVAALDQEGKEKELFDTKKVSRKVTYTKDGKVG 509
|
Db 421 YIGFELQEYELDEVANVAKGADELVAALDQEGKEKELFDTKKVSRKVTYTKDGKVG 480
QY 510 IMPKCGKTYFARQOLDLQJAFABOELMLKDKKHRYDIYDTGIEPLADVSSLPMA 569
|
Db 481 IMPKCGKTYFARQOLDLQJAFABOELMLKDKKHRYDIYDTGIEPLADVSSLPMA 540
QY 570 GNATYDTGSSFYPIPHIDHIVVPYSMLTRNOIATIKYVMOHPEVRPDVWSRGHEESSV 629
|
|

Db 541 GNATYDTGSSFYPIPHIDHIVVPYSMLTRNOIATIKYVMOHPEVRPDVWSRGHEESSV 600
QY 630 IPNVTPLDKRACGPMQOIHSAEYQKALAEGRFAAPDGYIFDPDVLAKETFWKDGSE 689
|
Db 601 IPNVTPLDKRACGPMQOIHSAEYQKALAEGRFATPGCIYIFDPDVLAKETFWKDGSE 660
QY 690 SIPRADGSSLRTINKSDLSQAEMQOAEILLAKNAGDATDTDKPEKQOADSNEQOPS 749
|
Db 661 SIPRADGSSLRTINKSDLSQAEMQOAEILLAKNAGDATDTDKPEKQOADSNEQOPS 720
QY 750 EASKEKESDDPDTSLPDYGLDRATLEHINOLAQKANDPKYLLFQEGVGFYKKNGL 809
|
Db 721 EASKEKESDDPDTSLPDYGLDRATLEHINOLAQKANDPKYLLFQEGVGFYKKNGL 780
QY 810 VTYDIKTLOQINP 822
|
Db 781 VTYDIKTLOQINP 793

RESULT 11
US-09-252-088-16
; Sequence 16, Application US/09252088
; GENERAL INFORMATION:
; APPLICANT: BRODEUR, Bernard R.
; APPLICANT: RIOUX, Clement
; APPLICANT: BOYER, Martine
; APPLICANT: CHARLEBOIS, Isabelle
; APPLICANT: HAMEL, Jose
; APPLICANT: MARTIN, Denis
; TITLE OF INVENTION: NOVEL GROUP B STREPTOCOCCUS ANTIGENS
; FILE REFERENCE: 8331-9002
; CURRENT APPLICATION NUMBER: US/09/252,088
; CURRENT FILING DATE: 1999-02-18
; EARLIER APPLICATION NUMBER: US/60/075,425
; EARLIER FILING DATE: 1998-02-20
; NUMBER OF SEQ ID NOS: 44
; SOFTWARE: Patentin Ver. 2.0
; SEQ ID NO 16
; LENGTH: 715
; TYPE: PRP
; ORGANISM: group B streptococcus
US-09-252-088-16

Query Match 86.1%; Score 3758; DB 16; Length 715;
Best Local Similarity 98.5%; Pred. No. 2,9e-299;
Matches 704; Conservative 6; Mismatches 5; Indels 0; Gaps 0;
QY 108 MTPNTHFKOSDIVINEILDGYVYKVGNTYVYLKPGSKRKNI RTKQOIAEQVAKGTKEAK 167
|
Db 1 MTPNTHFKOSDIVINEILDGYVYKVGNTYVYLKPGSKRKNI RTKQOIAEQVAKGTKEAK 60
QY 168 EKLGAQVAHLSKEEVAANVEAKRGRTYTDGYESPTDIIDDLGDAYLVPHGNHNYHYP 227
|
Db 61 EKLGAQVAHLSKEEVAANVEAKRGRTYTDGYESPTDIIDDLGDAYLVPHGNHNYHYP 120
QY 228 KDLSPSELAAQAYWSQKRGARPSDYRPPAPGRKAPI PDVTPNPGOGHQPNNGCY 287
|
Db 121 KDLSPSELAAQAYWSQKRGARPSDYRPPAPGRKAPI PDVTPNPGOGHQPNNGCY 180
QY 288 HPAAPRPNDASQKHORDEFKGTKEKELLDQHLRLDLKRYHNEEDGLIEPTQVKSNAF 347
|
Db 181 HPAAPRPNDASQKHORDEFKGTKEKELLDQHLRLDLKRYHNEEDGLIEPTQVKSNAF 240
QY 348 GYVYPGHGHHIIPRSQSLPELMELADRYLAGQTEENDSGSDHSPDKREVTHTFLGHR 407
|
Db 241 GYVYPGHGHHIIPRSQSLPELMELADRYLAGQTEENDSGSDHSPDKREVTHTFLGHR 300
QY 408 KAYGKGLDGKPYDTSAYVFSKESHSVDSGVTAKHGCHFH YIGFELQEYELDEVANV 467
|
Db 301 KAYGKGLDGKPYDTSAYVFSKESHSVDSGVTAKHGCHFH YIGFELQEYELDEVANV 360
QY 468 VKAKGADELVAALDQEGKEKELFDTKKVSRKVTYTKDGKVG YIMPDKGDFYARQOLDL 527
|
|

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||||| 361 VKAGGADELAAALDQEGKEKPLEFTKVSRYTKDGKVGVMKDGKDYFARQDL 420
||| 528 TQJFAEDELMLKDKKHRYDIVDTGIEPRLAVDVSSLPMAAGNATYDTGSSFFIPIHD 587
||| 421 TQJFAEDELMLKDKKHRYDIVDTGIEPRLAVDVSSLPMAAGNATYDTGSSFFIPIHD 480
||| 588 IHVVPYSWLFRNOIATIKYVMQHPEVRPDVMSKPGHESSGVIPNVTPLDKRAGPMMOI 647
||| 481 IHVVPYSWLFRNOIATIKYVMQHPEVRPDVMSKPGHESSGVIPNVTPLDKRAGPMMOI 540
||| 648 IHSAEEVOKALAEGRFAPDGYIFDPRDYLAKETFWMKDGSFISIPRADGSSLRTINKSDL 707
||| 541 IHSAEEVOKALAEGRFAPDGYIFDPRDYLAKETFWMKDGSFISIPRADGSSLRTINKSDL 600
||| 708 SOAEMOQAOELLAKKNAGDATDTDKPEEKQADKSNENQOPESEKESKESDDPIDSPLD 767
||| 601 SOAEMOQAOELLAKKNAGDATDTDKPEEKQADKSNENQOPESEKESKESDDPIDSPLD 660
||| 768 YGLDRATLEDHINOLAOKANIDPKYLIFOPEGVOFYNNKNGELVYDITLQOINP 822
||| 661 YGLDRATLEDHINOLAOKANIDPKYLIFOPEGVOFYNNKNGELVYDITLQOINP 715
```

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RESULT 12
US-09-252-088B-16
; Sequence 16, Application US/09252088B
; GENERAL INFORMATION:
; APPLICANT: BRODEUR, Bernard R.
; APPLICANT: RIOUX, Clement
; APPLICANT: BOTER, Martine
; APPLICANT: CHARLEBOIS, Isabelle
; APPLICANT: HAMEL, Josee
; APPLICANT: MARTIN, Denis
; TITLE OF INVENTION: NOVEL GROUP B STREPTOCOCCUS ANTIGENS
; FILE REFERENCE: 8331-9002
; CURRENT APPLICATION NUMBER: US/09/252,088B
; CURRENT FILING DATE: 1999-02-18
; PRIOR APPLICATION NUMBER: US/60/075,425
; PRIOR FILING DATE: 1998-02-20
; NUMBER OF SEQ ID NOS: 45
; SOFTWARE: PatentIn Ver. 2.0
; SEQ ID NO 16
; LENGTH: 715
; TYPE: PRT
; ORGANISM: group B streptococcus
US-09-252-088B-16
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Query Match 86.1%; Score 3758; DB 16; Length 715;
Best Local Similarity 98.5%; Pred. No. 2.9e-299;
Matches 704; Conservative 6; Mismatches 5; Indels 0; Gaps 0;
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QY 108 MTDPNYHFKOSDYNETLDDGYIVKVNNGYVYLKPSKRNKNTKQOIAEQVAKGTRKAK 167
||| 1 MTDPNYHFKOSDYNETLDDGYIVKVNNGYVYLKPSKRNKNTKQOIAEQVAKGTRKAK 60
||| 168 EKLGAQVAHLKKEEVAANVNAKRGRTTDDGYIFSPDTIIDLDGAYLVPHGNHNYIP 227
||| 61 EKLGAQVAHLKKEEVAANVNAKRGRTTDDGYIFSPDTIIDLDGAYLVPHGNHNYIP 120
||| 228 KKLDSSELAAQAYWSOKGGRAPSDYRPTAPGRKAPIDVTPNPGQHONGGY 287
||| 121 KKLDSSELAAQAYWSOKGGRAPSDYRPTAPGRKAPIDVTPNPGQHONGGY 180
||| 288 HPAAPRPNDASOKHODEFKGTKEKLLDOLHRLDLKXRYHVEDLLEPPQVITSNAP 347
||| 181 HPAAPRPNDASOKHODEFKGTKEKLLDOLHRLDLKXRYHVEDLLEPPQVITSNAP 240
||| 348 GYVVPDHGHYIIPRSQSLPEMELADRYLAGOTDNDGSDHKSDEKVTHTFLGHR 407
||| 241 GYVVPDHGHYIIPRSQSLPEMELADRYLAGOTDNDGSDHKSDEKVTHTFLGHR 300
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QY 408 KAYGKGLDGKPYDSDAYVESKSTHSYNDKSGVTAKHGHFHYIGFGELEYELDEVANM 467
||| 301 KAYGKGLDGKPYDSDAYVESKSTHSYNDKSGVTAKHGHFHYIGFGELEYELDEVANM 360
||| 468 VKAGGADELVAALDQEGKEKPLEFTKVSRYTKDGKVGVMKDGKDYFARQDL 527
||| 361 VKAGGADELVAALDQEGKEKPLEFTKVSRYTKDGKVGVMKDGKDYFARQDL 420
||| 528 TQJFAEDELMLKDKKHRYDIVDTGIEPRLAVDVSSLPMAAGNATYDTGSSFFIPIHD 587
||| 421 TQJFAEDELMLKDKKHRYDIVDTGIEPRLAVDVSSLPMAAGNATYDTGSSFFIPIHD 480
||| 588 IHVVPYSWLFRNOIATIKYVMQHPEVRPDVMSKPGHESSGVIPNVTPLDKRAGPMMOI 647
||| 481 IHVVPYSWLFRNOIATIKYVMQHPEVRPDVMSKPGHESSGVIPNVTPLDKRAGPMMOI 540
||| 648 IHSAEEVOKALAEGRFAPDGYIFDPRDYLAKETFWMKDGSFISIPRADGSSLRTINKSDL 707
||| 541 IHSAEEVOKALAEGRFAPDGYIFDPRDYLAKETFWMKDGSFISIPRADGSSLRTINKSDL 600
||| 708 SOAEMOQAOELLAKKNAGDATDTDKPEEKQADKSNENQOPESEKESKESDDPIDSPLD 767
||| 601 SOAEMOQAOELLAKKNAGDATDTDKPEEKQADKSNENQOPESEKESKESDDPIDSPLD 660
||| 768 YGLDRATLEDHINOLAOKANIDPKYLIFOPEGVOFYNNKNGELVYDITLQOINP 822
||| 661 YGLDRATLEDHINOLAOKANIDPKYLIFOPEGVOFYNNKNGELVYDITLQOINP 715
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RESULT 13
US-09-468-656-10
; Sequence 10, Application US/09468656
; GENERAL INFORMATION:
; APPLICANT: JOHNSON, Leslie S.
; APPLICANT: KOENIG, Scott
; APPLICANT: ADAMO, John E.
; TITLE OF INVENTION: Streptococcus Pneumoniae and Immunogenic Fragments for
; FILE REFERENCE: 469201-444
; CURRENT APPLICATION NUMBER: US/09/468,656
; CURRENT FILING DATE: 1999-12-21
; EARLIER APPLICATION NUMBER: 60/113,048
; EARLIER FILING DATE: 1998-12-21
; NUMBER OF SEQ ID NOS: 11
; SOFTWARE: PatentIn Ver. 2.0
; SEQ ID NO 10
; LENGTH: 819
; TYPE: PRT
; ORGANISM: Streptococcus pneumoniae
US-09-468-656-10
```

```
Query Match 24.2%; Score 1054; DB 18; Length 819;
Best Local Similarity 33.6%; Pred. No. 7.9e-77;
Matches 295; Conservative 103; Mismatches 235; Indels 246; Gaps 34;
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```
QY 1 VKKTYGYTGSVAAILLATHIGSYOLGKHHMGLATKD-NQIAYIDSGKGVAPRTKNTMD 59
||| 3 INKTY-LANGVA--VLALSVCSYELGRYOAGODKESKRVAYIDGDAQOKA--ENLTPD 57
||| 60 QISAEEGISAEOIYVKTIDGQVYTHSGDHYHFYNGKVPYDAITSEELLMTDPNYPKOSD 119
||| 58 EVSKREGINAEOIVKIKTDGQVYTHSGDHYHFYNGKVPYDAITSEELLMTDPNYPKOSD 117
||| 120 VINELLDGYIVKVNNGYVYLKPSKRNKNTKQOIAEQVAKGTRKAKGKLGAQVAHLK 179
||| 118 IVNETKGYIVKVNNGYVYLKPSKRNKNTKQOIAEQVAKGTRKAKGKLGAQVAHLK 167
||| 180 BEVAANVNAKRGRTTDDGYIFSPDTIIDLDGAYLVPHGNHNYIPKPDLSPELAA 239
||| 168 AD-NVAANAARQGRRTTDDGYIFNANSDIETGAYIYVPHGHYIIPKNELSASELAA 226
||| 240 QAYWSOKGGRAPSDYRPTAPGRKAPIDVTPNPGQHONGGYHPAPRPNDASQ 299
```

```

Db 227 EAYWNGKQ--GSRPSSSSSYNA-----NPAQPLSENHNLTVTP-----263
QY 300 NKHOREFGKTFKELLDOHRLDKYHVEEDGILEPTGVKSNAGVYVPHGDHYH 359
Db 264 TYHON--QGENISLLELAKPLSERHVESDGLIFDPAQITSRFARGVAVPHGNHYH 320
QY 360 IFRSOLSPLEMLAD---RYLAG-----QTDNDGSDHSPDSKEVYHTF 402
Db 321 IFEQMSLEKRIARIIFLRYRSHNHWDPDSRPEPSPQPPPEPSPQAPSNP-----374
QY 403 LGHRKAVGKGLDGPYTSDAVYFSKESITSVDKSGVTAHGDHFHYIGFGELEYELD 462
Db 375 -----IDGK-----LVKEAVAKY-----GDGY-----VEEEN 396
QY 463 EVANWVAKGQADELVLAALDQDEGKERPLFDTKVSRYTKDKGVYIMPKDKQDYFAR 522
Db 397 GVSRIYPAKDSAEFTAAGIDSKLAKQESL--SHKLGTKTD-----LPSDREYKRA 447
QY 523 YQDLDTQAFQEOELMLKDKKHRYDVLDTGIEPRLADVSSLPMHAGNATYDTGSSFYI 582
Db 448 YDL-----LARIHODLNNKGRQVDFEALDMLLE-RLK-DVSS-----483
QY 583 PHIDHIVVPYSWLTNRQIATIKYVMQHPEVRPDVMSKRGHESSGVITNVPPLDKRAGM 642
Db 484 ---DKVKLV-----EDILAFAPIRHPE-----RLGK 507
QY 643 PNMQIISAEVYOKALAEGRFAPDGYIFDPRDVLAKETFFVWKDGSFISPRADGSLRTI 702
Db 508 PMAQITTDDEIOVAKLAGYTAEDGYIFDPRDITSD-----GDAYVTPHMTHS--HWI 560
QY 703 NKSDLSQAEWQAOELLAKKNAGDATDTDKPREKQADKSNENQPSA--SKEEKESDD 760
Db 561 KQDLSSEAEKRAAQAAYAEKGL-----TPPSTDHODSGNTEAKGAALAVNVAANKV 613
QY 761 FIDSLP-----DYGLDRA-----TLEDHINOLAQKA 786
Db 614 PLDRMPYNOQYVEYKNGSLIIPHYDHYNIKEFEMFEDGLYEAAPRGYLEDLLATV----669
QY 787 NIDPKYLIFOP-----EGVOFYKNGELVT 811
Db 670 ---KYVEHPNDRPHSDNGCFGNASDHQV-RKKNQADT 703

RESULT 14
US-09-471-255-99
; Sequence 99, Application US/09471255
; GENERAL INFORMATION:
; APPLICANT: BIOCHEM PHARMA INC.
; APPLICANT: HAMEL, Jos,e
; APPLICANT: BRODEUR, Bernard R.
; APPLICANT: PINEAU, Isabelle
; APPLICANT: MARTIN, Denis
; APPLICANT: RIOUX, Cl,ment
; TITLE OF INVENTION: NOVEL STREPTOCOCCUS ANTIGENS
; FILE REFERENCE: 12806-11PCT
; CURRENT APPLICATION NUMBER: US/09/471,255
; PRIOR FILING DATE: 1999-12-23
; PRIOR APPLICATION NUMBER: US 60/113,800
; NUMBER OF SEQ ID NOS: 102
; SOFTWARE: FastSeq for Windows Version 3.0
; SEQ ID NO 99
; LENGTH: 811
; TYPE: PRT
; ORGANISM: S. pneumoniae
US-09-471-255-99

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Query Match 24.1%; Score 1052; DB 18; Length 811;
 Best Local Similarity 36.1%; Pred. No. 1,1e-76;
 Matches 270; Conservative 88; Mismatches 212; Indels 178; Gaps 26;

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QY 22 SYOLGKHNGLATKD--NQIATYIDSKGVKAPKTKNTMDQISAEGISABQIYVKTIDG 80
Db 2 SYELGRHOAGQVKKSKSNVSYIDGQAOKA--ENLPDEVSKEGGINAQIYKITIDG 59
QY 81 VYTSQGDHYHEYNKVAYDAIISELLMTDPNHYFKQSDVYNELDGYIKVGNNTYVL 140
Db 60 VYTSQGDHYHYNKGVPYDAIISELLMKDPNHYFKQSDVYNELDGYIKVGNNTYVL 119
QY 141 KGSKRKNIRKQOABDYVAKTEAKEKGLAOVAHLSKEEVAANVEAKROGRTYTDGY 200
Db 120 KDAHADNIRKKEELKRO-----KQERSHN-----HNSRAD--NAVAARAQGYTTDDGY 168
QY 201 IFSPTDITDLDGDAYLYVPHGNHYIYKPDLSPELAAQAYMSQKOGGARSQYRPT 260
Db 169 IFNSDITIEDTGDAYIYVPHGNHYIYKPDLSASLAAQAYWNGKQ--GSRPSSSSSHN 226
QY 261 APGRKAPIPVYTPNPOQHQDPNGGTHPAPPPNDASQKHQRDEFGKTFKELLQHL 320
Db 227 A-----NPAQPLSENHNLTVTP-----TYHON--QGENISLIRELY 262
QY 321 RLDKYHVEEDGILEPTGVKSNAGVYVPHGDHYHIIIPSOLSPLEMLAD-----RY 376
Db 263 AKPLSERHVESDGLIFDPAQITSRFARGVAVPHGDHYHIIIPSOLSPLEKTLARIIPRY 322
QY 377 LAG-----QTDNDGSDHSPDSKEVYHTFELGHRIRAKYAGKGLDGKPYDTS 423
Db 323 RSNHWDPDSRPEPSPQPPPEPSPQAPNPQPA-----PSNPIDEK-- 365
QY 424 AYVFSKESITSVDKSGVTAHGDHFHYIGFGELEYELDEVANWVAKGQADELVLAALDQ 483
Db 366 ---LVKEAVAKY-----GDGY-----VEEENGVRYPYPAVLAETAAGIDS 404
QY 484 EQGKERPLEPTKVSRYTKDKGVYIMPKDKQDYFYARYQDLQIAPAFQOELMLDKK 543
Db 405 KLAQESL--SHKLGAKTD-----LPSDREYKNAVDL--LARIHODLNNKGR 451
QY 544 HRYDYDVTGIEPRLADVSSLPMHAGNATYDTGSSFYIPIHDHIVVPYSWLTNRQIAT 603
Db 452 QVDFEALDMLLE-RLK-DVSS-----DKVKLV-----DDILA 481
QY 604 IKYVMQHPEVRPDVMSKRGHESSGVITNVPPLDKRAGMPNMQIISAEVYOKALAEGRF 663
Db 482 FLAPIRHPE-----RLGKPAQAQITTYDDDEIOVAKLAGKY 515
QY 664 AAPDGYIFDPRDVLAKETFFVWKDGSFISPRADGSLRTINKSDLSQAEWQAOELLAKKN 723
Db 516 TTEEDGYIFDPRDITSD-----GDAYVTPHMTHS--HWIKDLSSEAEKRAAQAAYAEKGC 568
QY 724 AGDATDITDKPREKQADKSNENQPSA 751
Db 569 L-----TPPSTDHODSGNTEAKGAEA 589

RESULT 15
US-09-471-255-99
; Sequence 95, Application US/09471255
; GENERAL INFORMATION:
; APPLICANT: BIOCHEM PHARMA INC.
; APPLICANT: HAMEL, Jos,e
; APPLICANT: BRODEUR, Bernard R.
; APPLICANT: PINEAU, Isabelle
; APPLICANT: MARTIN, Denis
; APPLICANT: RIOUX, Cl,ment
; TITLE OF INVENTION: NOVEL STREPTOCOCCUS ANTIGENS
; FILE REFERENCE: 12806-11PCT
; CURRENT APPLICATION NUMBER: US/09/471,255
; PRIOR FILING DATE: 1999-12-23
; PRIOR APPLICATION NUMBER: US 60/113,800
; NUMBER OF SEQ ID NOS: 102
; SOFTWARE: FastSeq for Windows Version 3.0
; SEQ ID NO 95
; LENGTH: 834

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OM protein - protein search, using sw model

Run on: December 3, 2001, 07:16:20 ; Search time 39.47 Seconds
(without alignments)
465.231 Million cell updates/sec

Title: US-09-645-835A-7
Perfect score: 4265
Sequence: 1 MKINKYLVGSAAALISVC.....KLALLKGNSPSSVSKKIN 816

Scoring table: BLOSUM62
Gapop 10.0 , Gapext 0.5

Searched: 212252 seqs, 22503292 residues

Total number of hits satisfying chosen parameters: 212252

Minimum DB seq length: 0
Maximum DB seq length: 200000000

Post-processing: Minimum Match 0%
Maximum Match 100%
Listing first 45 summaries

Database : Issued Patents, AA:*
1: /cgn2_6/ptodata/2/1aa/5A.COMB.pep:*
2: /cgn2_6/ptodata/2/1aa/5B.COMB.pep:*
3: /cgn2_6/ptodata/2/1aa/6A.COMB.pep:*
4: /cgn2_6/ptodata/2/1aa/6B.COMB.pep:*
5: /cgn2_6/ptodata/2/1aa/PTUTS.COMB.pep:*
6: /cgn2_6/ptodata/2/1aa/backfilest.pep:*

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

Result No.	Score	Query Match	Length	ID	Description
1	4163	97.6	796	4 US-08-961-083-56	Sequence 56, Appl
2	2661.5	62.4	763	4 US-08-961-083-56	Sequence 66, Appl
3	1186.5	27.8	447	4 US-08-961-083-56	Sequence 182, App
4	152	3.6	783	6 5231168-2	Patent No. 5231168
5	145.5	3.4	1073	4 US-09-541-782-6	Sequence 6, Appl1
6	144	3.4	1040	4 US-08-961-083-118	Sequence 118, App
7	140	3.3	1503	4 US-08-976-235-114	Sequence 114, Appl
8	140	3.3	2431	1 US-07-920-281C-2	Sequence 2, Appl1
9	140	3.3	2431	1 US-08-466-277-2	Sequence 2, Appl1
10	135.5	3.2	740	1 US-08-257-073-5	Sequence 5, Appl1
11	135.5	3.2	1183	2 US-08-447-031A-2	Sequence 2, Appl1
12	135	3.2	2308	1 US-08-015-973-1	Sequence 1, Appl1
13	135	3.2	2308	1 US-08-448-164-1	Sequence 1, Appl1
14	135	3.2	2308	4 US-08-061-929-2	Patent No. 5268270
15	133.5	3.1	1507	6 5268270-2	Sequence 2, Appl1
16	133.5	3.1	1664	2 US-08-642-846-2	Sequence 2, Appl1
17	133	3.1	1093	5 PCT-US93-03077-1	Sequence 1, Appl1
18	133	3.1	1093	1 US-08-471-033-50	Sequence 50, Appl
19	132	3.1	1338	2 US-08-471-044-50	Sequence 50, Appl
20	132	3.1	1338	2 US-08-471-046A-50	Sequence 50, Appl
21	132	3.1	1338	2 US-08-471-046A-50	Sequence 50, Appl
22	132	3.1	1338	2 US-08-470-566A-50	Sequence 50, Appl
23	132	3.1	1338	2 US-08-469-334-50	Sequence 50, Appl
24	132	3.1	1338	3 US-09-300-529-50	Sequence 50, Appl
25	130.5	3.1	1435	2 US-08-568-459A-4	Sequence 4, Appl1
26	130.5	3.1	1435	2 US-08-487-826B-4	Sequence 4, Appl1
27	130	3.0	2115	4 US-09-324-867-5	Sequence 5, Appl1

28	129	3.0	688	3 US-09-141-047-8	Sequence 8, Appl1
29	129	3.0	2860	2 US-08-826-267-2	Sequence 2, Appl1
30	128.5	3.0	916	1 US-08-188-228-48	Sequence 48, Appl
31	128.5	3.0	916	1 US-08-332-643-42	Sequence 42, Appl
32	128.5	3.0	916	1 US-08-332-638-48	Sequence 48, Appl
33	128.5	3.0	1848	4 US-08-296-791-6	Sequence 6, Appl1
34	128.5	3.0	1848	5 PCT-US95-10661A-6	Sequence 6, Appl1
35	128	3.0	1194	4 US-08-488-940-18	Sequence 18, Appl
36	128	3.0	1375	4 US-09-210-361-4	Sequence 4, Appl1
37	127.5	3.0	2133	2 US-08-670-707A-37	Sequence 37, Appl
38	127.5	3.0	2133	4 US-09-037-601-37	Sequence 37, Appl
39	127	3.0	1194	2 US-08-488-940-17	Sequence 17, Appl
40	126	3.0	813	2 US-08-488-940-3	Sequence 3, Appl1
41	126	3.0	1194	2 US-08-488-940-1	Sequence 1, Appl1
42	125.5	2.9	1181	2 US-08-488-940-2	Sequence 2, Appl1
43	124.5	2.9	3969	4 US-08-061-376-5	Sequence 5, Appl1
44	123	2.9	628	3 US-08-656-034-2	Sequence 2, Appl1
45	123	2.9	800	2 US-08-488-940-4	Sequence 4, Appl1

ALIGNMENTS

RESULT 1
US-08-961-083-56
Sequence 56, Application US/08961083
Patent No. 6159469
GENERAL INFORMATION:
APPLICANT: Choi et. al.
TITLE OF INVENTION: Streptococcus pneumoniae Antigenes and Vaccines
NUMBER OF SEQUENCES: 452
CORRESPONDENCE ADDRESS:
ADDRESSEE: Human Genome Sciences, Inc.
STREET: 9410 Key West Avenue
CITY: Rockville
STATE: Maryland
COUNTRY: USA
ZIP: 20850
COMPUTER READABLE FORM:
MEDIUM TYPE: Diskette, 3.50 inch, 1.4MB storage
COMPUTER: HP Vectra 486/33
OPERATING SYSTEM: MSDOS version 6.2
SOFTWARE: ASCII Text
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/961,083
FILING DATE:
CLASSIFICATION: 435
PRIOR APPLICATION DATA:
APPLICATION NUMBER:
FILING DATE:
ATTORNEY/AGENT INFORMATION:
NAME: Brookes, A. Anders
REGISTRATION NUMBER: 36,373
REFERENCE/DOCKET NUMBER: PB340P2
TELECOMMUNICATION INFORMATION:
TELEPHONE: (301) 309-8504
TELEFAX: (301) 309-8512
INFORMATION FOR SEQ ID NO: 56:
SEQUENCE CHARACTERISTICS:
LENGTH: 796 amino acids
TYPE: amino acid
STRANDEDNESS: Single
TOPOLOGY: Linear
MOLECULE TYPE: protein
US-08-961-083-56

Query Match 97.6%; Score 4163; DB 4; Length 796;
Best Local Similarity 99.9%; Pred. No. 0;
Matches 795; Conservative 0; Mismatches 1; Indels 0; Gaps 0;
QY 21 SYELGIYQARTVKNRNVSYIDKQATQKTEMLTPREVSKREGINAEQIVIKITPDQGYVT 80
|||||

```

Db      1 SYELGLYQARTVKENNRSYIDGKQATOKTENTLPDEVSKREGINAEOIVIKITDGGYVT 60
QY      81 SHGDHYHYNGVVPDAITISELLKMDPNYKLDKEDIVNEVGGYVIKYDGYVYLLKDA 140
        |||
Db      61 SHGDHYHYNGVVPDAITISELLKMDPNYKLDKEDIVNEVGGYVIKYDGYVYLLKDA 120
QY      141 AHADNVKTEKELINROKOEHSOHEGTPRNDGAVALARSOGRYTTDDGYIFNASDIIEDT 200
        |||
Db      121 AHADNVKTEKELINROKOEHSOHEGTPRNDGAVALARSOGRYTTDDGYIFNASDIIEDT 180
QY      201 GDAYIYPHGDHYHYPKNELSASELAAPLISGNGNLSNSTRYRONSDNTSRFNWVPS 260
        |||
Db      181 GDAYIYPHGDHYHYPKNELSASELAAPLISGNGNLSNSTRYRONSDNTSRFNWVPS 240
QY      261 VSNPRTNTNTSNSTNSQASOSNDISLKLQYKPLSQRHVESDGLVFPDPAQITSRT 320
        |||
Db      241 VSNPRTNTNTSNSTNSQASOSNDISLKLQYKPLSQRHVESDGLVFPDPAQITSRT 300
QY      321 ARGVAAPHGHDHYHYPYSOMSELEERIANIPLRYNSNMWVPSRPOPSPTPEPSPG 380
        |||
Db      301 ARGVAAPHGHDHYHYPYSOMSELEERIANIPLRYNSNMWVPSRPOPSPTPEPSPG 360
QY      381 POPAPNLKIDSNSLSVQLVRKVGEGYVEEKGISRYFAKDLPSRYVAKNLSKLSKQES 440
        |||
Db      361 POPAPNLKIDSNSLSVQLVRKVGEGYVEEKGISRYVAKDLPSRYVAKNLSKLSKQES 420
QY      441 VSHTLTAKKENVAPRDOEFYDKAYNLLTEAHKALFENKGRNSDFOALDKLERLNDESTN 500
        |||
Db      421 VSHTLTAKKENVAPRDOEFYDKAYNLLTEAHKALFENKGRNSDFOALDKLERLNDESTN 480
QY      501 KEKLVDDLAFAPLITPHERLGRPNQSIETTEDVIRIAQADKYTTSDGYIPEHDIISD 560
        |||
Db      481 KEKLVDDLAFAPLITPHERLGRPNQSIETTEDVIRIAQADKYTTSDGYIPEHDIISD 540
QY      561 EGDAYVTPHGHSHWIGKDSLSDEKVAQAQYTKKGIILPPSPDADYKANPTGDSAAAIY 620
        |||
Db      541 EGDAYVTPHGHSHWIGKDSLSDEKVAQAQYTKKGIILPPSPDADYKANPTGDSAAAIY 600
QY      621 NRYGKERIPLVRLPYVEHTVEYKNGNLIIPKDHYNHFKFMPDHYTKAANGTLED 680
        |||
Db      601 NRYGKERIPLVRLPYVEHTVEYKNGNLIIPKDHYNHFKFMPDHYTKAANGTLED 660
QY      681 LFAITIKYVEHPDERPHSNNGWGNASHEVILGKDHSEDPKKNKADPEEVEETPAPEEVP 740
        |||
Db      661 LFAITIKYVEHPDERPHSNNGWGNASHEVILGKDHSEDPKKNKADPEEVEETPAPEEVP 720
QY      741 QVETEKVEAQLKEAEVLLAKVTDLSKANATETLAQLRNLIPLQIMDNNSIMAEKLLA 800
        |||
Db      721 QVETEKVEAQLKEAEVLLAKVTDLSKANATETLAQLRNLIPLQIMDNNSIMAEKLLA 780
QY      801 LKGSNPSVSKEKIN 816
        |||
Db      781 LKGSNPSVSKEKIN 796

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OPERATING SYSTEM: MSDOS version 6.2
SOFTWARE: ASCII Text
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/961,083
FILING DATE:
CLASSIFICATION: 435
PRIOR APPLICATION DATA:
APPLICATION NUMBER:
FILING DATE:
ATTORNEY/AGENT INFORMATION:
NAME: Brookes, A. Anders
REGISTRATION NUMBER: 36,373
REFERENCE/DOCKET NUMBER: PB340P2
TELECOMMUNICATION INFORMATION:
TELEPHONE: (301) 309-8512
TELEFAX: (301) 309-8512
INFORMATION FOR SEQ ID NO: 66:
SEQUENCE CHARACTERISTICS:
LENGTH: 763 amino acids
TYPE: amino acid
STRANDEDNESS: single
TOPOLOGY: linear
MOLECULE TYPE: protein
US-08-961-083-66

Query Match      62.4%; Score 2661.5; DB 4; Length 763;
Best Local Similarity 66.8%; Pred. No. 14e-192;
Matches 520; Conservative 78; Mismatches 131; Indels 49; Gaps 8;

QY      20 CSYELGLYQARTV-KENNRSYIDGKQATOKTENTLPDEVSKREGINAEOIVIKITDGGY 78
        |||
Db      1 CSYELGRHQAGVKESNRVSYIDGDAQAKENLTPDEVSKREGINAEOIVIKITDGGY 60
QY      79 VSHGDHYHYNGVVPDAITISELLKMDPNYKLDKEDIVNEVGGYVIKYDGYVYLLKDA 138
        |||
Db      61 VSHGDHYHYNGVVPDAITISELLKMDPNYKLDKEDIVNEVGGYVIKYDGYVYLLKDA 120
QY      139 DAHADNVKTEKELINROKOEHSOHEGTPRNDGAVALARSOGRYTTDDGYIFNASDIIE 198
        |||
Db      121 DAHADNVKTEKELINROKOEHSOHEGTPRNDGAVALARSOGRYTTDDGYIFNASDIIE 177
QY      199 DTGDAYIYPHGDHYHYPKNELSASELAAPLISGNGNLSNSTRYRONSDNTSRFNWV 258
        |||
Db      178 DTGDAYIYPHGDHYHYPKNELSASELAAPLISGNGNLSNSTRYRONSDNTSRFNWV 226
QY      259 PSVSNPRTNTNTSNSTNSQASOSNDISLKLQYKPLSQRHVESDGLVFPDPAQITS 318
        |||
Db      227 ANPQPRLSNNINLVYTPYTHO-NOGENTSSLLRELAKPLSERHVESDGLVFPDPAQITS 285
QY      319 RTARGVAAPHGHDHYHYPYSOMSELEERIANIPLRYNSNMWVPSRPOPSPTPEPSPG 378
        |||
Db      286 RTARGVAAPHGHDHYHYPYSOMSELEERIANIPLRYNSNMWVPSRPOPSPTPEPSPG 345
QY      379 PGQAPAPNLK-IDSN---SLVSOLVRKVGEGYVEEKGISRYFAKDLPSRYVAKNLSKLSK 434
        |||
Db      346 PGQAPAPNLK-IDSN---SLVSOLVRKVGEGYVEEKGISRYFAKDLPSRYVAKNLSKLSK 405
QY      435 LSKQESVSHTLTAKKENVAPRDOEFYDKAYNLLTEAHKALFENKGRNSDFOALDKLERLN 494
        |||
Db      406 LAKQESLSHKLAKKTDLSRREFYNKAYDILARIHQDLDDNKRQVDFEALDMLRL 465
QY      495 NDESTNKEKLVDDLAFAPLITPHERLGRPNQSIETTEDVIRIAQADKYTTSDGYIPE 554
        |||
Db      466 KDYXSDKVLXDIILAFAPLIRPHERLGRPNQSIETTEDVIRIAQADKYTTSDGYIPE 525
QY      555 HDIISDEGAYVTPHGHSHWIGKDSLSDEKVAQAQYTKKGIILPPSPDADYKANPTGD 614
        |||
Db      526 HDIISDEGAYVTPHGHSHWIGKDSLSDEKVAQAQYTKKGIILPPSPDADYKANPTGD 585
QY      615 SAAAIYNRVYGERIPLVRLPYVEHTVEYKNGNLIIPKDHYNHFKFMPDHYTKAANGT 674
        |||
Db      586 GAELATNRVYGERIPLVRLPYVEHTVEYKNGNLIIPKDHYNHFKFMPDHYTKAANGT 645

```

305 I PVNEDEFEDVHTEQLDLDHKTVPDEIVEVEIIPSELHNEVAHHEIVEIIEEVPPEPNÖN 364

[illegible]

```

RESULT 5
US-09-541-782-6
: Sequence 6, Application US/09541782
: Patent No. 6284480
: GENERAL INFORMATION:
: APPLICANT: Nislow, Corey
: APPLICANT: Sakowicz, Roman
: APPLICANT: Beraud, Christophe
: TITLE OF INVENTION: Antifungal Assay
: FILE REFERENCE: 1015
: CURRENT APPLICATION NUMBER: US/09/541,782
: CURRENT FILING DATE: 2000-04-03
: NUMBER OF SEQ ID NOS: 10
: SOFTWARE: FastSeq for Windows Version 4.0
: SEQ ID NO 6
: LENGTH: 1073
: TYPE: PRT
: ORGANISM: S.pombe
US-09-541-782-6

```

	Query Match	3.4%;	Score 145.5;	D8	A.	length 1073;	
	Best Local Similarity	18.6%;	Pred. No. 0.019;				
	Matches 182;	Conservative 136;	Mismatches 357;	Indels	301;	Gaps	41;
Oy	43 GKATOKTENTLTPDESKREGINAE-----QIVIKI--TDGCVYTSHQDHYHYN	90					
	: : : : : : : : : : : : : : : :						
D8	147 GGTGTCTKTYMSSD-LSDSDGLISGAGLIPRALYTQLFSSLDMSNOEYAVK-CSYEELN	204					
Oy	91 GKVPDAIIISEELMKDPNYKLDED-----IVNVKGGYIKYKDGYYYUUKDMAHADN	145					
	: : : : : : : : : : : : : : : :						
D8	205 EET-RLDLVSEEL--RKPARVEEDTSRRKNVYTGIEESY-IKNAOGCLRLLRGSHRQ	260					
Oy	146 VRTKEELNRKOES-----OHREGTTPNDGAVALARSQSRYTTDDGYIFNASDIIEDT	200					
	: : : : : : : : : : : : : : : :						
D8	261 VAATKCMDLSRSBSHTFTTLHRKXSSGMTDETNSLTJLN-----NSDDLRL-	307					
Oy	201 GDAYIVPHGDHYHIYPKNEISASELAAPLSCGNISNSRT-----	243					
	: : : : : : : : : : : : : : : :						
D8	308 -----ASKLHWYLDASENI--GRSGAENKKARETGINOSLLITLRVI	349					
Oy	244 -----YR-----RONDSNTSRTMMWVSVPSTGTTNTSNNSTNSQAQS	284					
	: : : : : : : : : : : : : : : :						
D8	350 NALVEKAHHPIPYRESKITRLLDOSLOGCKTKTSMIYTVS---STNNLEETISTILEVARA	406					
Oy	285 NDIDSLAKOJLYKLPISORHVESDGLVFDDAQI-----TSRTARGVAAPHGHYHFIPYSQ	339					
	: : : : : : : : : : : : : : : :						
D8	407 K---SIRKKPQNNDLVFRKKYLINDVLDERLKNDLNATRKKNGVYLAESTYFKELMRVQ	463					

```

OY 340 MSEL-----ERIKRITILPLVRSHMWPDRPQRPQPTPPSPGPOPANLKI-----389
Db 464 NKDLDOEQARKILEVDLWKS-----SRDLOQVXSNQNEHKKEVDALDLOLVNASTE 517
OY 390 -----DSSSLVSQLVKRYVGEYVEEKISRYVAKULPSEYTKNLESKLSMOESVSH 444
Db 518 LESVSENEKLEKNELEIETERRKRYETNEAKITTVATDLSQYRSEKEYIASLYEKIDRT 577
OY 445 LTAKEVWAPRDOEPFYKAVNL-----TEAH 471
Db 578 ERNKEN-----ENNFWMLKKNLLTMYLRSPHGSFTDETNGEFTLLDNFVASMEDLLHNSN 633
OY 472 KALPEKNGRNSFOALDKLER-----LNDESTNKEKLVDDLLAFIAPIT 516
Db 634 QLLISMRTKEHFOSIDPEALQASRSCAVPNSDLIVSELSKDSKNSLLDLHSHSDIS 693
OY 517 -HPERLGKPN-----QIEYTEDE-----VR-1AOL 540
Db 694 MSSQKLGANGISELLELOKMKESYRQVLOELNLSYNOHTHEESQOKELMWGVRRNDIAL 753
OY 541 ADKYTTS--DGYTFDEHDITDEGDVAVPRHMSHMIKSDLSDEKRYVAAQAYTKREGI 598
Db 754 YKTCITSLNDADIT--LSDYISDQSKRESQOOLIANIGKIVSNFLOCONSLEYTK-----808
OY 599 LPSPDADYKANPFGDSAAL--YNRKSGKRIPLVR-----LPVWEHTEYV 645
Db 809 -----ADILSHLDUTNINSIRKANETIMNNRSEEFILMNAASOAEIYGANKREKIOCTVE--860
OY 646 NGNLIITPHKDH-YHNIKFAPWDDHTYKAPNG-----YTLEDFATIKYVEHDERP 696
Db 861 NSQQLDLSKSKAIHNSRSMTYDCLATAEESOKOVNLEVOULTDRLLOKYK-----E 911
OY 697 HSNDDGNASEHVLCKDHSDDPKNKKADBEPEETPAPEVQVETKEVYEAQLEAEV 756
Db 912 HSEDNTKEKHQOOLLLESLVGNNDNL-----IDSKTPTHELO-----950
OY 757 LKAVTDSLK-----ANATETLAGLRN-----NLTLQIMNNSIMAA-----EKILA 800
Db 951 ---KIDHVKLTSTLANHTNELLGDESLICNLETTIETDTSVLKLETTGTGPXKRELPA 1007
OY 801 LAKGNSPSSVSEKIN 816
Db 1008 TPSPWTRDSSLIKETTN 1023

```

1 RESULT 6
 2 US-08-961-083-118
 3 ; Sequence 118, Application US/08961083
 4 ; Patent No. 6159469
 5 ;
 6 GENERAL INFORMATION:
 7 APPLICANT: Choi et. al.
 8 TITLE OF INVENTION: Streptococcus pneumoniae Antigenes and Vaccines
 9 NUMBER OF SEQUENCES: 452
 10 CORRESPONDENCE ADDRESS:
 11 ADDRESSEE: Human Genome Sciences, Inc.
 12 STREET: 9410 Key West Avenue
 13 CITY: Rockville
 14 STATE: Maryland
 15 COUNTRY: USA
 16 ZIP: 20850
 17 ;
 18 COMPUTER READABLE FORM:
 19 MEDIUM TYPE: Diskette, 3.50 inch, 1.4mb storage
 20 COMPUTER: HP Vectra 486/33
 21 OPERATING SYSTEM: MSDOS version 6.2
 22 SOFTWARE: ASCII Text
 23 CURRENT APPLICATION DATA:
 24 APPLICATION NUMBER: US/08/961,083
 25 ;
 26 FILING DATE:
 27 CLASSIFICATION: 435
 28 PRIOR APPLICATION DATA:
 29 APPLICATION NUMBER:
 30 FILING DATE:
 31 ;

..... 727

718 ET SENETI PLOERNIT KCSI GCUHURDI 27

b 718 ELSENFLQEKNLKGLSSKEHINDLOT-----EKNAGTEAMLETSCRNSLDTEL 771

```

OY 280 QASQNDIDSLKQLYKPLSQRVESDG-----LVFDPQOITSRTANGAVPHGDHYH 333
      : : : : : : : : : : : : : : : : : : : : : : : : : : : : : :
Db 772 QFAENKPOLSL-----QENVSTKGDPTDVMGLDGLSTLSQSSPVQVP----- 816
      : : : : : : : : : : : : : : : : : : : : : : : : : : : : : :
OY 334 FIPYSQMSLEERLARIPLRYRSNHVWPSRPEQSPQPT-----PEP-----SPGB 381
      : : : : : : : : : : : : : : : : : : : : : : : : : : : : : :
Db 817 --PTS--FETETPRRV-----PPDSLPFGQETGPTCLDVIVPEDLQHDISPDA 862
      : : : : : : : : : : : : : : : : : : : : : : : : : : : : : :
OY 382 QAPAPLKIDSSSLVSQLVRKVGEGYFEEKGISRYVFAADLPSBYVKNLESKLSQESY 441
      : : : : : : : : : : : : : : : : : : : : : : : : : : : : : :
Db 863 VIVP--VEILLSTARTSHLDNR-----SODSPQESSEIL--RLTESDSY 902
      : : : : : : : : : : : : : : : : : : : : : : : : : : : : : :
OY 442 -SHITLAKENAVPR-----DOEFYKAYNLLTEAHKALFENKGRNSDFOALDK----- 489
      : : : : : : : : : : : : : : : : : : : : : : : : : : : : : :
Db 903 LADDLIASVSGSSLPRLGQELHNKPPSEDDHSHRLKLEAVETLQNSKDAKFA 962
      : : : : : : : : : : : : : : : : : : : : : : : : : : : : : :
OY 490 -LLERLNDESTNKEKLVDDLAFIAPITHPRRLKQPSQIEYTEDVERINQADKYTSD 548
      : : : : : : : : : : : : : : : : : : : : : : : : : : : : : :
Db 963 GLVSAISDSTQSDSLLEDLSAPFPASEPS-LETPDS-LESV----- 1003
      : : : : : : : : : : : : : : : : : : : : : : : : : : : : : :
OY 549 GYTFDEHDIISDEGAYYTPHMGSHWIGKDSLSDKEKVAQAAYTK-----KGLPESP 603
      : : : : : : : : : : : : : : : : : : : : : : : : : : : : : :
Db 1004 ---DVHEALDLSLSH--TP-----OKIVPRDQPADSGYETENLESPEWTLHPAP 1048
      : : : : : : : : : : : : : : : : : : : : : : : : : : : : : :
OY 604 DADVKANP--TGDSAALYINRVKGEKRIPLVRLPYMEHTVEVKNGLIIPHKHYNINIK 661
      : : : : : : : : : : : : : : : : : : : : : : : : : : : : : :
Db 1049 EGTADSEPAFTGDCGHS-----GLPKNPVI---VISDAGDGHNGTEVTP----- 1089
      : : : : : : : : : : : : : : : : : : : : : : : : : : : : : :
OY 662 FANFDHTYKAPNGYTLLEDFATIKYVEHPERPHSNDQMGNSHVLGKXHSDEPNK 721
      : : : : : : : : : : : : : : : : : : : : : : : : : : : : : :
Db 1090 -----ETFGAGSGSYRD-----SAFESDNDSEPEKR-----SEELPG-----TSSA 1127
      : : : : : : : : : : : : : : : : : : : : : : : : : : : : : :
OY 722 NFKADEPEVEETPAPEVPQVETKEVQALKEAE--VLIAYTDSCLKANAT 771
      : : : : : : : : : : : : : : : : : : : : : : : : : : : : : :
Db 1128 LVIVQEQPLPEVPLPGQSPAQSCLEARKSQPDESCSLAHNSSDLIELRAT 1179
      : : : : : : : : : : : : : : : : : : : : : : : : : : : : : :

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```

RESULT 8
US-07-920-281C-2
; Sequence 2, Application US/07920281C
; Patent No. 5739026
;
GENERAL INFORMATION:
; APPLICANT: Garoff, Henrik
; APPLICANT: Liljestrom, Peter
; TITLE OF INVENTION: DNA Expression Systems Based on
; TITLE OF INVENTION: Alphaviruses
; NUMBER OF SEQUENCES: 27
;
CORRESPONDENCE ADDRESS:
; ADDRESSEE: Birch, Stewart, Kolasch & Birch
; STREET: P. O. Box 747
; CITY: Falls Church
; STATE: Virginia
; COUNTRY: USA
; ZIP: 22040-0747
;
COMPUTER READABLE FORM:
; MEDIUM TYPE: Floppy disk
; COMPUTER: IBM PC compatible
; OPERATING SYSTEM: PC-DOS/MS-DOS
; SOFTWARE: Patentin Release #1.0, Version #1.25
;
CURRENT APPLICATION DATA:
; APPLICATION NUMBER: US/07/920,281C
; FILING DATE: 13-AUG-1992
; CLASSIFICATION: 435
;
ATTORNEY/AGENT INFORMATION:
; NAME: Murphy Jr., Gerald M.
; REGISTRATION NUMBER: 28,977
; REFERENCE/DOCKET NUMBER: 828-103P
; TELECOMMUNICATION INFORMATION:
; TELEPHONE: 703-241-1300
; TELEFAX: 703-241-2848
;
TELEX: 248345
;
INFORMATION FOR SEQ ID NO: 2:
;
SEQUENCE CHARACTERISTICS:

```

```

;
; LENGTH: 2431 amino acids
; TYPE: amino acid
; TOPOLOGY: linear
; MOLECULE TYPE: protein
US-07-920-281C-2

```

```

Query Match 3.3%; Score 140; DB 1; Length 2431;
Best Local Similarity 19.7%; Pred. No. 0.18;
Matches 137; Conservative 93; Mismatches 253; Indels 212; Gaps 34;

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OY 76 QGYVSHGDHYHYNG--KVPYDAITSEELMKDPNKKLKDIEDIVNEVKGQYIKYDKY 134
      : : : : : : : : : : : : : : : : : : : : : : : : : : : : : :
Db 1523 KYSTTDSLSLYSEGKTFNQALDAMEILLTPRLQEA NEOICLYALGETM----- 1574
      : : : : : : : : : : : : : : : : : : : : : : : : : : : : : :
OY 135 VYLKDAHADNVKKEELNROKQESHQREGGPRNDCAVALRSQGRYTTDDGYIFNNS 194
      : : : : : : : : : : : : : : : : : : : : : : : : : : : : : :
Db 1575 -----DNIRSKQPVN-----DSOSTPPT--VPCLCR-----YAMTAE 1606
      : : : : : : : : : : : : : : : : : : : : : : : : : : : : : :
OY 195 DLEEDTG-----DAIVPHGDHYHYIPKNELASSELAAAEAFLSGRLNSRTYR 245
      : : : : : : : : : : : : : : : : : : : : : : : : : : : : : :
Db 1607 KLAURLSHQVSMVYCSPFLP--KYHVDSQVKCKEYLLFPDTPV--SVVSPRKYA 1660
      : : : : : : : : : : : : : : : : : : : : : : : : : : : : : :
OY 246 RQNSDNTSRT-----NVPSVSNPCTTNTTSNNSNTNSQASQNDISLQOLYKPL 299
      : : : : : : : : : : : : : : : : : : : : : : : : : : : : : :
Db 1661 ASTTDSHSDRLSGFDLDW-----TTDSSSTASDTSWLSPLSDSCDSDTYEPMAIYV 1712
      : : : : : : : : : : : : : : : : : : : : : : : : : : : : : :
OY 300 -SQRVHSEGLFDPDAQOITSRTANGAVAPHGDHYHFIYQSMSLEERLARIIPRYRSN 358
      : : : : : : : : : : : : : : : : : : : : : : : : : : : : : :
Db 1713 TADVHPEPAGIDLANDVHPEA-----DHV-----DLEMPIP--PPRKRRA 1752
      : : : : : : : : : : : : : : : : : : : : : : : : : : : : : :
OY 359 HWVPDSRPOSPQPTPEPSPGQAPAPMLKT-----DSNSSLVSQLYKRVGEGYFEEKG 413
      : : : : : : : : : : : : : : : : : : : : : : : : : : : : : :
Db 1753 AYLASAAREPVPAPR--KTPAPRTAFRNKRLPTEGDFDEHEVALSGITFGDFDVL 1811
      : : : : : : : : : : : : : : : : : : : : : : : : : : : : : :
OY 414 ISR--YVAKDLSTYVKNLESKLSKQESVSHLTAKKENAVAPRDOEFYDQKAYNLLTEA 470
      : : : : : : : : : : : : : : : : : : : : : : : : : : : : : :
Db 1812 LGRAGATIFSSDTGS--CHLQKSYRQ--HNQCAQDAVQEEKMYPRK--LDTER 1861
      : : : : : : : : : : : : : : : : : : : : : : : : : : : : : :
OY 471 HKALF-----ENKGRNSDFOALDKLLERLNDESTNKEKLVDDLAFIAP--ITHP 518
      : : : : : : : : : : : : : : : : : : : : : : : : : : : : : :
Db 1862 EKLILLKMQHPSEANKSRQGS--RKVENMKATVUVRLTSGARLYTGADVGRIPTVAVKRP 1920
      : : : : : : : : : : : : : : : : : : : : : : : : : : : : : :
OY 519 ERLGKPSQIETTEDEVRIA--QLADKYTSDGY--TFDEHDIISDEGDAYVTPHMGHS 573
      : : : : : : : : : : : : : : : : : : : : : : : : : : : : : :
Db 1921 RPVYSPVTEIRFSSPDVALAACNETHSRNPTVYASQITDEIDALDAMD----- 1970
      : : : : : : : : : : : : : : : : : : : : : : : : : : : : : :
OY 574 HWIGKDSLSDKE--KYAAQAYTKREKI-----LPPSP-----DADVKAN----- 610
      : : : : : : : : : : : : : : : : : : : : : : : : : : : : : :
Db 1971 ---GSDSCIDRATFCRAKILCYPKHNAHQPTVRSAPVSPFQNTLQNYLAATAKRCNVT 2027
      : : : : : : : : : : : : : : : : : : : : : : : : : : : : : :
OY 611 -----PTGDSAAAIYN-----RVKGEKR----- 628
      : : : : : : : : : : : : : : : : : : : : : : : : : : : : : :
Db 2028 QMRBLPTMDS--AVFNVECEKRYACSGEWEYAKOPIITENTITTYTKLKGKAAL 2085
      : : : : : : : : : : : : : : : : : : : : : : : : : : : : : :
OY 629 -----IPLVRLPYMEHTVEVKNGLIIPKNDH 656
      : : : : : : : : : : : : : : : : : : : : : : : : : : : : : :
Db 2086 FAKTHNLVPLQEV--MDRFTVDMKRDYKVPGRKH 2119
      : : : : : : : : : : : : : : : : : : : : : : : : : : : : : :

```

```

RESULT 9
US-08-466-277-2
; Sequence 2, Application US/08466277
; Patent No. 6190666
;
GENERAL INFORMATION:
; APPLICANT: Garoff, Henrik
; APPLICANT: Liljestrom, Peter
; TITLE OF INVENTION: DNA Expression Systems Based on
; TITLE OF INVENTION: Alphaviruses
; NUMBER OF SEQUENCES: 27
;
CORRESPONDENCE ADDRESS:
; ADDRESSEE: Birch, Stewart, Kolasch & Birch
; STREET: P. O. Box 747

```

CITY: Falls Church
STATE: Virginia
COUNTRY: USA
ZIP: 22040-0747
COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patentin Release #1.0, Version #1.25
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/466,277
FILING DATE: 06-Jun-1995
CLASSIFICATION: <Unknown>
PRIOR APPLICATION DATA:
APPLICATION NUMBER: 07/920,281
FILING DATE: <Unknown>
ATTORNEY/AGENT INFORMATION:
NAME: Murphy Jr., Gerald M.
REGISTRATION NUMBER: 28,977
REFERENCE/DOCKET NUMBER: 828-103P
TELECOMMUNICATION INFORMATION:
TELEPHONE: 703-241-1300
TELEFAX: 703-241-2848
TELEX: 248345
INFORMATION FOR SEQ ID NO: 2:
SEQUENCE CHARACTERISTICS:
LENGTH: 2431 amino acids
TYPE: amino acid
TOPOLOGY: linear
MOLECULE TYPE: protein
SEQUENCE DESCRIPTION: SEQ ID NO: 2:
US-08-466-277-2

Query Match
Best Local Similarity 3.3%; Score 140; DB 4; Length 2431;
Matches 137; Conservative 93; Mismatches 253; Indels 212; Gaps 34;

Db 76 OGVTASHDHYHYNG-KVPIDAISEELMKDPNKLKDEDIYNEVGKGVYIKVDGKY 134
1523 KISTSDSLVYEGTGFNOAIDMAEILTLMPRLQANEQICLVALGETM----- 1574
QY 135 VYLKDAADNVRTKEEINROKQESQREGGTPRNDGAVVALASQGRYTTDGCYIFNAS 194
1575 -----DNIRSKCPVN-----DSBSTPPT-VPCLCR-----YANTAE 1606
Db 1607 RIARLSHQVKSMMVYCSFFLP--KYHVDGVQKVCCKVLEFDPVP--SVVSPRKYA 1660
QY 195 DIIEDTG-----DAYIVPHGDHYHYIPKNELSASELAAMAEFLSGRNLNSRTYR 245
246 KONSNTSRT-----NMVPSVSNPNTNTNSNTNSQASQSDNDISLLKQLYKLP 299
Db 1661 ASTDHSRSLRGFDLW-----TTSSSTASDTSLSLQSCDIDISYEPMAPIYV 1712
QY 300 -SQRVESDGLVDPQAITSRTARGAVVPHGDHYHFTIPYSOMSELEERTARIPIPLRYR 358
1713 TADVHPPEAGIADLAADVHEPA-----DHV-----DLENPLP--PPPKKA 1752
Db 359 HWVDSRPEQSPQTPPEPSPGQAPANLKI-----DSNSSLVSQLVKRVGEGYFEENG 413
1753 AYLSRAERFVPAAR-KTPAPARTAFRNKLPLTFGDFGHEVDALASGITGDFDVL 1811
QY 414 ISR---YFAKDLFSETVKNLESKLSKQESVSHTLTAKKENVAPROEYEDKAYNLITTA 470
1812 LGRAGAVIFSSDTS---GHLQOKSVQ-----INLQCAQIDAVOEKMPK--LDER 1861
QY 471 HKALF-----ENKGRNSDFQALDKLIERLNDESTNKEKLVDDLAFAP---ITHP 518
Db 1862 EKLLLLKMQHPSRANKSRYS--RKVENMKATVYDRLTSGARLYTGADVGRIPTAVR 1920
QY 519 ERLGKPSQJTEYDEVERIA---OLADKTYTSDGY-IDDEHDIISDEDDAVYTHMGHS 573
Db 1921 RPVYSPVIERFSSPDVAIACNEYISRNTPYVASIOTIDEVDAYLDVMD----- 1970

QY 574 HWIGKDSLSDKE---KYAAQAYTKREKGI-----LPPSP-----DADVKAN----- 610
Db 1971 ---GSDCLDRATFCPCAKLRCYKHHAYHOPIYRSVSPFONLQNLAAATKNCNVT 2027
QY 611 -----PRGDSAAIYV-----RYKGEK--- 628
Db 2028 QMBELPTMS--AVFVVECFKRYACSGEYWEYAKOPIRITTENTITYVTYTKGPKMAAL 2085
QY 629 -----IPLVRLPYVHEHDVEYKNGNLITPHKH 656
Db 2086 FAKTHNLVPLQEYP-MDRFTVDMKRDVYKVPQTKH 2119

RESULT 10
US-08-257-073-5
Sequence 5, Application US/08257073
Patent No. 5766597
GENERAL INFORMATION:
APPLICANT: Paoletti, Enzo
APPLICANT: de Taisne, Charles
TITLE OF INVENTION: MALARIA RECOMBINANT POXVIRUS VACCINE
NUMBER OF SEQUENCES: 143
CORRESPONDENCE ADDRESS:
ADDRESSEE: Curtis, Morris & Safford, P.C.
STREET: 530 Fifth Avenue, 25th Floor
CITY: New York
STATE: New York
COUNTRY: UNITED STATES OF AMERICA
ZIP: 10036
COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patentin Release #1.0, Version #1.30
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/257,073
FILING DATE: 09-JUN-1994
CLASSIFICATION: 424
PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 08/075,783
FILING DATE: 11-JUN-1993
PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 07/852,305
FILING DATE: 18-MAR-1992
PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 07/672,183
FILING DATE: 20-MAR-1991
ATTORNEY/AGENT INFORMATION:
NAME: Frommer, William S.
REGISTRATION NUMBER: 25,506
REFERENCE/DOCKET NUMBER: 454310-2570
TELECOMMUNICATION INFORMATION:
TELEPHONE: (212) 840-3333
TELEFAX: (212) 840-0712
TELEX: 425066 CURTMS
INFORMATION FOR SEQ ID NO: 5:
SEQUENCE CHARACTERISTICS:
LENGTH: 740 amino acids
TYPE: amino acid
STRANDEDNESS: single
TOPOLOGY: linear
MOLECULE TYPE: peptide
FRAGMENT TYPE: internal
US-08-257-073-5

Query Match
Best Local Similarity 3.2%; Score 135.5; DB 1; Length 740;
Matches 145; Conservative 109; Mismatches 262; Indels 305; Gaps 35;

QY 4 NKKYLV---GSAALILSVCSYELGLYQARYKNNRVSIDGKATQKTENTLPPDEVSK 60


```

Db 515 GYTKKENG- VNTNTEKPIETTSISGEKVMDDKDNODGKRPKSVNLLANGKVKTLTD 572
QY 457 -----QER-----YDKAVNL--LTEAH-----KALFENK-----478
Db 573 VTSETNMKYEERKDLPKYDEGKIEYVTEHVKDYTDYDINGTITTKKYPGETSATVTKN 632
QY 479 ---GRNSDFQALDKLRL--NDESTNKEKLVDDLAFLAPITHPERLGRKPSQIEYTED 533
Db 633 WDDNNNDGKRPTEIKELVODGKATGKTALINESNNHTWTGLDEKAK-GQOYKTYVE 691
QY 534 EVRAIQAOLADKTYTSDGYI--FDEHD---IISDEGDAYVTPHMGSIMWIGKDS-----580
Db 692 EL-----TKYKGYTTHVDNNDMGNLIVTKYTPETTSISGEKVMDDKDNODGKRP 742
QY 581 -----LSDKEKVAQAQYTEKELIPSPDADYKANPTGDSAAAIYRVKGEKRIPLVYL 634
Db 743 KVSYNLLADEKVKTLDTVSE-----TNMKYEFKDLPKYD-----EGKRIEYVTE 788
QY 635 PYMVEHTVEVKNGLI-----IPKHGHYH-----IKPWFDD-----667
Db 789 DHVMDYTTDI-NGTITTKYTPGETSATVTKMMDDNNNDGKRPTEIKELVODGKATG 847
QY 668 -----HTY-----KAPN---GYLLEDFATIKTYVHPERPHSNDGWN---704
Db 848 TALLNESNNHTWTGLDEKAGQOYKTYVEEL-TKYKGYTTHVD-----NNDMGNLIVT 901
QY 705 -----ASEHVLGKKDSED--PNK---NFKADEPVEETPAPE-----VP 740
Db 902 NKYPETTSISGEKVMDDKDNODGKRPKSVNLLANGKVKTLDTVETMKKEFEKDL 961
QY 741 QV-ETKEVEAOLKEAVLLAKVYDSSLKANAT-----ETLAGLRNNLTLOIMDNN 961
Db 962 KYDEGKRIEYVTEH-----VKDYTTDINGTITTKKYPGETSATVTKNMD-----DNNN 1012
QY 791 IMAEAKELLALLKSNPSVSKE 813
Db 1013 -----QDGKRPTEIKYE 1024

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RESULT 12
US-08-015-973-1
Sequence 1, Application US/08015973
Patent No. 5604094
GENERAL INFORMATION:
APPLICANT: Schlessinger, Joseph
TITLE OF INVENTION: A NOVEL RECEPTOR-TYPE PHOSPHOTYROSINE
TITLE OF INVENTION: PHOSPHATASE-BETA
NUMBER OF SEQUENCES: 9
CORRESPONDENCE ADDRESS:
ADDRESSEE: PENNIE & EDMONDS
STREET: 1155 Avenue of the Americas
CITY: New York
STATE: New York
COUNTRY: U.S.A.
ZIP: 10036-2711
COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: PatentIn Release #1.0, Version #1.25
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/015, 973
FILING DATE: 10-FEB-1993
CLASSIFICATION: 435
ATTORNEY/AGENT INFORMATION:
NAME: Mistrock, S. Leslie
REGISTRATION NUMBER: 18,872
REFERENCE/DOCKET NUMBER: 7683-021
TELEPHONE: (212)790-9090
TELEFAX: (212)869-8864/9741
TELEX: 66141 PENNIE
INFORMATION FOR SEQ ID NO: 1:

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; SEQUENCE CHARACTERISTICS:
; LENGTH: 2308 amino acids
; TYPE: amino acid
; TOPOLOGY: linear
; MOLECULE TYPE: protein
US-08-015-973-1

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Query Match          3.2%; Score 135; DB 1; Length 2308;
Best Local Similarity 19.2%; Pred. No. 0.4;
Matches 169; Conservative 123; Mismatches 276; Indels 310; Gaps 44;

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QY 71 IKIPDGYVTSHGDIHYHYNGKPYDAIISSELMMDPKYKLDKEDIVNEVGVYIVD 130
Db 954 VGVYQGSLSFGSPSHI-----PIPKSLITPIASLQIPIHALSG-----D 993
QY 131 GKYYVYLKDAAMADNVRKKEINROKOEHSOIREGGTPRNDGVAL-----ARSQRYT 184
Db 994 GEW-----SGASSDS-----EFLPDTDLTALNISPVSVAEFTYT 1030
QY 185 T-----DDGYTFNADIIEDTGDAYIVPHGDHYH-----IPK-----NELSASLEAAE 229
Db 1031 TSVFGDDNKLKSKSELIYGNETELQIPSENEWYVPESESTVPMNMDVNNKLNASLOETS 1090
QY 230 AFLSGRG-----NLNSRTYR--RONSNTS-----RTMWVP 259
Db 1091 SISSTGMPFGLAHTTKVFDHEISQVPENNFVQPIHTVSOASGDTSLKPVLSANSEP 1150
QY 260 SVSNPGTT-----NTNNSNTNSQAS--QSNDDISLLKQLYKLPISORHVES 306
Db 1151 ASSDPASSSEMLSPSTQLFYEITSASFSTEVLLOPSEQASVDVTLTKV--LPA-----VPS 1204
QY 307 DGLVDPDAQ-----ITSRTARGVAAPHGDHYHFIFYSQMSESEERARIPIRY 355
Db 1205 DPLIVETPKVDKISSTMLHLIVSNSASSENNLHSTSVFPEFPTSHMHSALQGLITST 1264
QY 356 RSNHWVPDSRPPQSPQPTPEPSPQPPAPNKLKDSNSLVSQLVRVREGYVEEKGIS 415
Db 1265 ASEKIEPVLLKSESSHQVVP-----SLYSNDELFOFANLEINAH--PPKG-- 1308
QY 416 RYVFAKDLPS--ETVKNLESKLSKQESVHTLTKAKKEVAPR-----DGEFYDKAY 464
Db 1309 RHVFATPVLSIDEPNLTNKLHNSDEI--LITKTSYGVKVPAGIPTVASDPTVDH 1365
QY 465 NL-LTEAH-----KALFENK-----479
Db 1366 SVPTGNCHVAITAVSPHSDGVSVTSTKLLFPKATSELSHSAKSDAGLVGGEDGDTDDG 1425
QY 480 -----RNSDFQALDKLRLNDESTNKEKLVDDLAFLAPITHPERLGRKPSQIEY 530
Db 1426 DDDDDDDSGSLSIHKMS--CSSYREGQEKYMD-----SDTHNSLMDQNNPISYSLS 1478
QY 531 --TEDEVRIALADKTYT-----SDGYIFDEHD-----ISDE 561
Db 1479 ENSEEDNKNVTSSVSDQTDMDRSPGKSPSANGLSQKHNDK--EENDIOTGSAALPLSPE 1536
QY 562 GDAYVTPHMGSHWIGK--DSLSDKREKVA--AQAYTKER--GIL-----PSS 602
Db 1537 SKAMAVILTSDESSGGGDTSLNENETSTDSEFADINEADAGDILAADSETITPGFPDS 1596
QY 603 PDADV-----KANPTGDSAAAIYRVKGERK--IPLVRLPYMVEHTVEYVN 646
Db 1597 PTSSVTSENSEVFEHVSFAEASNSHESRIGLAGLESEKKAVIPITVYSALEFICLVY 1656
QY 647 GNLIIPK-----DHYNIKRFAMFDDHY-----KAPGYLLEDLFA--TIYVVEHDE 694
Db 1657 GILTYMKKCYOTAHF-----YLEDSTSPRVISTPPTPIFPISDVGALPIKHFPHVAD 1710
QY 695 RPHSNDGWNANSEHV-----LG-----KDHSEDPKN 722
Db 1711 L-HASSGTFEEFEVQSCVVDLIGITADSNHPNKKHN 1747

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RESULT 13
US-08-448-164-1
Sequence 1, Application US/08448164
Patent No. 592536
GENERAL INFORMATION:
APPLICANT: Schlessinger, Joseph
TITLE OF INVENTION: A NOVEL RECEPTOR-TYPE PHOSPHORYROSINE
TITLE OF INVENTION: PHOSPHATASE-BETA
NUMBER OF SEQUENCES: 9
CORRESPONDENCE ADDRESS:
ADDRESS: PENNIE & EDMONDS
STREET: 1155 Avenue of the Americas
CITY: New York
STATE: New York
COUNTRY: U.S.A.
ZIP: 10036-2711
COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patent Release #1.0, Version #1.25
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/448,164
FILING DATE: 24-MAY-1995
CLASSIFICATION: 435
PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 08/015,973
FILING DATE: 10-FEB-1993
ATTORNEY/AGENT INFORMATION:
NAME: Mistrock, S. Leslie
REGISTRATION NUMBER: 18,872
REFERENCE/DOCKET NUMBER: 7683-021
TELECOMMUNICATION INFORMATION:
TELEPHONE: (212)790-9090
TELEFAX: (212)869-8864/9741
TELEX: 66141 PENNIE
INFORMATION FOR SEQ. ID NO: 1:
SEQUENCE CHARACTERISTICS:
LENGTH: 2308 amino acids
TYPE: amino acid
TOPOLOGY: linear
MOLECULE TYPE: protein
US-08-448-164-1

Query Match 3.2%; Score 135; DB 2; Length 2308;
Best Local Similarity 19.2%; Pred. No. 0.4; 276; Indels 310; Gaps 44;
Matches 169; Conservative 123; Mismatches 123;
QY 71 IKINDGVVSHGDHYHYMGKQVYDAIISSEELMKDPNYKLKDEDIVNEVKGYYIKVD 130
DB 954 VGVYVQSLPSGPHI-----PIPKSLIPIPTASLLQPTALSG-----D 993
QY 131 GRYYVYLKDAHADNVNRTKEINROKOEHSOHEGCTPRNDGVAL-----ARSGRYT 184
DB 994 GEM-----SGASSDS-----EFLLPDTGTLALNISPVSAFTT 1030
QY 185 T-----DQYIFNADIIEDTGDAYIVPHGDHYH-----IPK-----NELSASELAAE 229
DB 1031 TSVFGDDKALSKSEIIIGNTLEIQISFNMVYPRSESTVMPMYMDVKNLMSLOETSV 1090
QY 230 AFLSGRG-----NLSNRTYR-RONSQNTS-----RTNWVP 259
DB 1091 SISRTRKMGFPSLAHTTKVVDHEISQVPENNFVQPTHTVSOASGDTSLKPVLSANSEP 1150
QY 260 SYSNNGT-----NTNNSNNTNSOAS-OSNDISLKLKLYLPLSQRHVES 306
DB 1151 ASSDASSEMSPSTQLLFYFSSFSFTEVLLQSPASDVDTLKTV--LPA-----VPS 1204
QY 307 DGLVDPQO-----ITSRTARCAVAPHGHDHYHFIPTYSQMSLEERLARIIPDKY 355
DB 1205 DPLVETPRVKISSITMLHLIVSNASSENMLHSTSVVDFVSPSHMSASLOGLTISY 1264

QY 356 RSNHWVDPDSREPOSPQTPPEPSGPOPAENLKIDSNSSLVQYKVGEGYVEEKGIS 415
DB 1265 ASEKEPYLLKSESSHOYV-----SLYSNDELFOJANLEINQAH--PPKG-- 1308
QY 416 RYVEAKDLPS--ETVKNLESKLSKOEVSHTLAKKENAVR-----DOEFDAKY 464
DB 1309 RHVFATPVLSIDELPLINKLHNSDET---LSTSSVGVKAGIPIVVASDTEFVSDH 1365
QY 465 NL-LTEAH-----KALFENKG----- 479
DB 1366 SVPIGNHVAITAVSPHHDGSVTSTKLLFPKSKATSELSHSAKSDAGLVGGEDGDTDDG 1425
QY 480 -----RNSDFOALDKLERLNDESTNKEKLVDDLAFAPLTHPERLKPNQILEY--- 530
DB 1426 DDDDDRGSDGLSIHKCMS--CSSYRESEKVMND-----SDTHENSLMDQNPISYSLS 1478
QY 531 --TEDEVRIADLAKYTT-----SDGYTFDEHDI-----ISDE 561
DB 1479 ENSEEDNRYTSVSDSQTMDRSPKSPSANGLSQKHNQK--ENDIQGSAALLPLSP 1536
QY 562 GDAYVTPHMGHSHWIGK--DSLSDKEKVA--AAQYTERK--GTL-----PPS 602
DB 1537 SKAMAVLTSDESGSGQGTSDSLNENETSTDFSPADTEKQDADILAAGDSEITPGFPQS 1596
QY 603 PDADV-----KANPTGDSAAATYNNYKGEKR--ITLVRLPYVMEHTVEYN 646
DB 1597 PTSSVTSENSEVFHVSEASNSHESRIGLAEGLESKRAVILVYSAITPICLVLV 1656
QY 647 GNLIIRHK-----DHYHNIKFAWEDDHYT-----KAPNGYTLDELPA-TIKYVEHPE 694
DB 1657 GILTIYRKCEQTAHF-----YLEDSTSPRYSTPTPTPIFIISDVGAIPKHKPKHVA 1710
QY 695 RPHSNDGMNASEHV-----LG-----KKHSEDPNKN 722
DB 1711 L-HASSGTFEEFEVQSTVDIGITADSSNHDNKHKN 1747

RESULT 14
US-08-081-929-2
Sequence 2, Application US/08081929
Patent No. 6160090
GENERAL INFORMATION:
APPLICANT: Schlessinger, Joseph
APPLICANT: Barnea, Gilad
APPLICANT: Grumet, Martin H.
TITLE OF INVENTION: A NEW CLASS OF RPTases: THEIR
TITLE OF INVENTION: STRUCTURAL DOMAINS AND LIGANDS
NUMBER OF SEQUENCES: 13
CORRESPONDENCE ADDRESS:
ADDRESS: PENNIE & EDMONDS
STREET: 1155 Avenue of the Americas
CITY: New York
STATE: New York
COUNTRY: U.S.A.
ZIP: 10036
COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patent Release #1.0, Version #1.25
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/081,929
FILING DATE: 23-JUN-1993
CLASSIFICATION: 514
ATTORNEY/AGENT INFORMATION:
NAME: Coriuzzi, Laura A.
REGISTRATION NUMBER: 30742
REFERENCE/DOCKET NUMBER: 7683-041-999
TELECOMMUNICATION INFORMATION:
TELEPHONE: 212 790-9090
TELEFAX: 212 869-8864/9741
TELEX: 66141 PENNIE

; INFORMATION FOR SEQ ID NO: 2:
 ; SEQUENCE CHARACTERISTICS:
 ; LENGTH: 2308 amino acids
 ; TYPE: amino acid
 ; STRANDEDNESS: single
 ; TOPOLOGY: unknown
 ; MOLECULE TYPE: protein
 ; US-08-081-923-2

Query Match 3.2%; Score 135; DB 4; Length 2308;
 Best Local Similarity 19.2%; Pred. No. 0.4;
 Matches 169; Conservative 123; Mismatches 276; Indels 310; Gaps 44;

71 IKITDGYVTSGHDIHYNGKVPYDAIISELLMKDPNYKDKEDIVNEVKGKGVKVD 130
 954 VGVTYQGSLEFSGPSHI-----PIPKSLITPTASLLQPTALSG-----D 993
 131 GKYYVYLKDAHADNVRTKEELNRKQESHQREGGTPRNDGAVAL-----ARSQRYT 184
 994 GEM-----SGASSDS-----EFLLPDTGLTALNISPVSVAEFTYT 1030
 185 T-----DGGIIFNASDIIEDTDGAYVPHGDHYH-----IPK-----NELSASELAAE 229
 1031 TSVEGDDNKALKSEELIYNFETELQIPFENEMYVPESESTVPMNMYNKLNLASLOETSV 1090
 230 AFLSGRG-----NLSNRTYR-RONSNTS-----RTNWV 259
 1091 SISRKMGFPSSLAHHTTKYVDEHISGVPENNFVOPHTHTVSQASGDTSLKPYLSANSEP 1150
 260 SVSNPGTT-----NTNNSNNTNSQAS-OSNDISLLQVLPISQHNVS 306
 1151 ASSDPASSEMLSPSTOLLFEYETSASFTEVLLQPSFQASVDLTLLTV-LPA---VPS 1204
 307 DGLVFDPAQ-----ITSRTAGVAVPHGDHYHPIVPSOMSELEERLARIIPRY 355
 1205 DPILVETPKVDKISTTMLHLYVNSASSENMLHSTSPVFDVSPSHMSASIQGLTISY 1264
 356 RSNINWVDSREPOSPQPPPEPSGPQAPANLKIDNSSSLVQVAKVQEGVFEKGIS 415
 1265 ASEKEVEVLLKSSSHQVVP-----SLYSNDLFTQANLEIQAH--PPKG-- 1308
 416 RYVFANDLPB--ETVKNLSKSLKQESVSHITLAKKENAVP-----DOEFYDAY 464
 1309 RHVEATPVLISIDPLNTLNLKLIHSDI--LTSKSSVTGKVFAGIPTVASDFVSTDH 1365
 465 NL-LTEAH-----KALFENKG----- 479
 1366 SVPIGNHVAITAVSPHRDGSVTSTKLFPKATSELSHSAKSDAGLVGGEDDQDDG 1425
 480 -----RNSDFQALDKLERLNDSTNKEKLVDDLAFIATHTPERLKGPNQIEY-- 530
 1426 DDDDDRGSDGLSIHKMS-CSSYRESQEKVMD--SDTHNSLMQNNNISYSL 1478
 531 --TEDEVRIALQADKYTT-----SDGYIPDEHI-----ISDE 561
 1479 ENSEEDNVTYSVSSQGMDSRPGKSPSANGLSQKHNDAK--EENDIQGALLPLSP 1536
 562 GDAYPTPMHSGSHWIG--DSLSDKEVA--AQAYTKER--GIL-----PPS 602
 1537 SKAMAVLTLSDESSGSGQCTSDSLNENETSTDFSPADTNEKADAGIILAGSETTPGPPOS 1596
 603 PDADV-----KANPTGDSAAALYNNVKEGR--IPVRLPYMVEHTEVEVN 646
 1597 PTTSSVTSENSEVFHVSEASNSHESRIGLAGLESEKAAVPLVIVSALTFICLVLV 1656
 647 GNLIIPK-----DHYNIKRAMFDQHTY-----KAPNGYTLDELFA-TIKIYVHPDE 694
 1657 GILTYMKKCTQTAFF-----YLEDSTSPVISTPPTPIFPIISDDGALPIKHFKNVAD 1710
 695 RPHSNDMGNASEHY-----LG-----KQHSBDPKN 722
 1711 L-HASSGFTFEFEVQSCYVDLQITADSSNHPDNKKN 1747

RESULT 15
 5268270-2
 ; Patent No. 5268270
 ; APPLICANT: Meyer, Thomas F.; Halter, Roman; Pohner, Johannes
 ; TITLE OF INVENTION: PROCESS FOR PRODUCING PROTEINS USING GRAM
 ; NEGATIVE HOST CELLS
 ; NUMBER OF SEQUENCES: 6
 ; CURRENT APPLICATION DATA:
 ; APPLICATION NUMBER: US/07/171, 872
 ; FILING DATE: 01-JUL-1987
 ; SEQ ID NO: 2
 ; LENGTH: 1507
 5268270-2

Query Match 3.1%; Score 133.5; DB 6; Length 1507;
 Best Local Similarity 18.1%; Pred. No. 0.26;
 Matches 183; Conservative 125; Mismatches 305; Indels 399; Gaps 53;

73 ITDGYVTSHG-----DHYHYNGKVPYDAIISELLMKDPNYKDKEDIVNEVKG 124
 523 ITNPSLSVSHSTQNDYDEDDSYVRRPRPQ--GKLYKKVRY----- 566
 125 YVIRKGYKYVYLKDAHADN-----VTRKEELNRKQESHQR-----EGG-----TP 168
 567 YALSGGRFLNAPMPENGVAENNDMIFMGYTOEARKKAMNKNRRIQDEGGFDEENG 626
 169 RNDGAVL-----ARSQRYTTDGYIFNASDIIEDTDGAYI-----VPHGDHY----- 212
 627 GHNALNLNNGKSAQNRFLITGAMLNKG-ISTGVNVLISGRPTPHARDEVNKSARK 685
 213 --HYIPKNEI-----SASELAA--AEAFSLGRG-----NLSNRTYR 245
 686 DAHFSKNEVEFEDDMINTFTKAEIAYVQASFSGRVAVDITANITATDNKAVNLGYK 745
 746 --NGDEVCAVSIDTYGTYTCNTGNSLSDKALNSFDXATKINGNVLNQNALVYLGKALMGK 803
 283 ---QSDNDISLKL-----OLYKLPISQRYH----- 304
 804 IQGQNSRVSLNOMSKWHLTGDSQYHNLSLADSHILNNSADAQASANKYPTIKINHLSGN 863
 305 -----ESDGL-VFDPACITSTRARGVA 325
 864 GHHYITLDAKKLGVKVEASAGHYOLHVQNKTEGEPNQGELDLFPASSVQDSRLFVS 923
 326 VPHGDHYHPIYSOMS-----ELEERTARIITPRYSNHHVPSRREOPSPOT----- 374
 924 LAN---HYVDGALRYTIKTENGITRLY---NPAGKGRVVKPAPSPANTASQAQ 973
 375 -----PE-----PSPGPAPANLKIDNSSLV-----SOLV 400
 974 KATQYDGAQIAKPPQIVVAPPSPQANAEELRQAKAEQYKQQAABAEKAVARQKDEAK 1033
 401 RKVGE-GVVEFEKGISRVVFAKDLPSEYVKNLESKLSKQSVSHITLAK-----KENVAP 454
 1034 RKAELIANQOEAKKAELAKKQAEERKARELARQKAEASHQANAKPKRRRRRALIP 1093
 455 RD-----OEYDKAVNNLITEAH 471
 1094 RPPAPVSLDDYDAKDNSESSIGNLARVPIRMGRELLINYEELPLELDEDEAEERROAT 1153
 472 KALFENGRNSDFQALDKLERLNDSTNKEKLVDDLAFIATHTPERLKGPNQIEY 531
 1154 Q--PHSSRRN--RAISS--EPSSDEASVSTSD-----KHPQDNTLHKEVETA 1199
 532 EDEVRIQ-----LADKYTSDGYIFDE-----HDITSDGDAYVVRPHMGSHWIGKD 579
 1200 GLOPRAAQPTQAAAQADAVSTWNTNSALSDAMASTQSIILLDTG-AVLTIRH-----IAOK 1252

